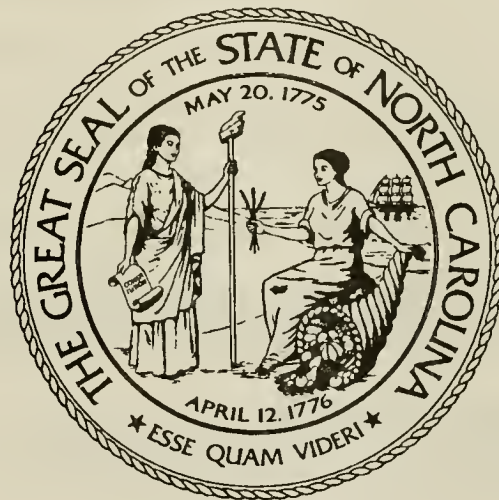


**LEGISLATIVE
RESEARCH COMMISSION**

COASTAL WATER QUALITY



**REPORT TO THE
1989 GENERAL ASSEMBLY
OF NORTH CAROLINA
1989 SESSION**

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STATE OF NORTH CAROLINA
LEGISLATIVE RESEARCH COMMISSION
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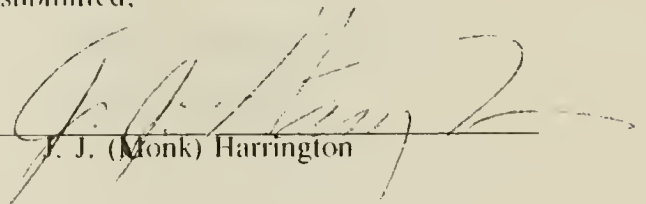
December 14, 1988

TO THE MEMBERS OF THE 1989 GENERAL ASSEMBLY:

The Legislative Research Commission herewith submits to you for your consideration its final report on coastal water quality. The report was prepared by the Legislative Research Commission's Committee on Continuation of Study Coastal of Water Quality pursuant to Section 2.1(18) of Chapter 873 of the 1987 Session Laws.

Respectfully submitted,


Liston B. Ramsey


J. J. (Monk) Harrington

Cochairmen
Legislative Research Commission

1987-1988

LEGISLATIVE RESEARCH COMMISSION MEMBERSHIP

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PREFACE

The Legislative Research Commission, established by Article 6B of Chapter 120 of the General Statutes, is a general purpose study group. The Commission is co-chaired by the Speaker of the House and the President Pro Tempore of the Senate and has five additional members appointed from each house of the General Assembly. Among the Commission's duties is that of making or causing to be made, upon the direction of the General Assembly, "such studies of and investigations into governmental agencies and institutions and matters of public policy as will aid the General Assembly in performing its duties in the most efficient and effective manner" (G.S. 120-30.17(1)).

At the direction of the 1987 General Assembly, the Legislative Research Commission has undertaken studies of numerous subjects. These studies were grouped into broad categories and each member of the Commission was given responsibility for one category of study. The Co-chairs of the Legislative Research Commission, under the authority of G.S. 120-30.10(b) and (c), appointed committees consisting of members of the General Assembly and the public to conduct the studies. Co-chairs, one from each house of the General Assembly, were designated for each committee.

The study of coastal water quality was authorized by Section 2.1(18) of Chapter 873 of the 1987 Session Laws (1987 Session). That act states that the Commission may consider House Bill 1252 in determining the nature, scope and aspects of the study. House Bill 1252 continues the purpose of the study as set out in Section 152 of Chapter 1014 which reads in part: "The Legislative Research Commission may perform a comprehensive study and reevaluation of coastal water quality classifications. The Commission may also evaluate existing and proposed rules of the Environmental Management Commission, Coastal Resources Commission, the Marine fisheries Commission, and any other State agency regarding coastal water quality." The relevant

portions of Chapter 873, House Bill 1252, and Chapter 1014 are included in Appendix A. The Legislative Research Commission grouped this study in its Water Quality area under the direction of Representative Bruce Ethridge. The Committee was chaired by Senator Marc Basnight and Representative Fred Bowman. The full membership of the Committee is listed in Appendix B of this report. A committee notebook containing the committee minutes and all information presented to the committee is filed in the Legislative Library.

COMMITTEE PROCEEDINGS

The Coastal Water Quality Legislative Study Committee met eleven times. Four of those meetings were public hearings held in Wilmington, Beaufort, Edenton, and Ahoskie.

The Committee heard from numerous speakers and addressed a very broad range of topics. In its first meeting the Committee focused on background presentations and was brought up to date on recent modifications to water quality rules and standards. New issues of concern for the Committee's consideration were outlined by various speakers. One issue that demanded the immediate attention of the Committee was the invasion of the State's coast by the Red Tide, a toxic algae that occasionally appears in warm, calm waters and affects clams and oysters, making them unfit for human consumption. Over 300,000 acres of shellfishing grounds along North Carolina's coast were closed due to the Red Tide causing severe economic distress to commercial fishermen and to those with businesses dependent upon the shellfishing industry. Committee members learned that the North Carolina Congressional delegation had introduced legislation requesting relief for commercial fishermen, but that it was unknown how long it would take to have the legislation enacted and relief granted. Expressing concern that more immediate relief be granted to those affected by the Red Tide, the Committee adopted a motion directing that a letter be sent to the Governor asking him to inquire of the Council of State whether State funds existed that could be made available by way of immediate loans to people adversely affected by the Red Tide and whether any other action the Governor deemed necessary could be taken. A communication expressing the concern of the Committee was also sent to the North Carolina Congressional delegation. A copy of this letter is included in Appendix C.

At its first meetings, the Committee also received a request that it visit the coast for public input. It was stated that many people along the coast are frustrated with the

handling of coastal water quality protection, but are unable to take time from work to come to Raleigh to address the Committee about their concerns.

In response to this plea and to identify more accurately the concerns of the public for coastal water quality, the Committee scheduled its next eight meetings at four different locations along the coast. In each instance the Committee toured specific sites relating to coastal water quality in the area, conducted a public hearing at night for the convenience of the people in the area, and held a regularly scheduled Committee meeting the following morning.

The Committee made a conscientious effort at public hearings to note questions that speakers had either been unable to have answered by State agencies or regarding matters that speakers were unsure as to which agency to contact. The Committee referred these questions and requests for information to the appropriate agency and sent the agency responses, when possible, to the person seeking the answer. Copies of those letters to the agencies and their responses are included in Appendix E.

Other issues presented at public hearings that required more than brief agency responses were included on the Committee's agenda for more in-depth study and discussion at a later, regular meeting of the Committee. The Committee, therefore, spent much of its time investigating matters that coastal citizens indicated to be of most importance to them.

The list of topics studied by the Committee is extensive and includes the following:

1. Agricultural Cost-Share Best Management Practices Program;
2. Red Tide;
3. Albemarle-Pamlico Estuary Study;
4. Consolidation of State environmental agencies;
5. Maryland's Chesapeake Bay Program;

6. Marinas and the need for additional pump out stations;
7. The need to modify membership requirements of the Environmental Management Commission;
8. Concerns about downgrading of various shellfish waters;
9. Outstanding Resource Waters and the nominating process and final classification of those waters;
10. Regional approaches taken by the Council of Governments to protect coastal water quality;
11. The military presence and its effect on the environment in Dare County;
12. The benefit of stabilizing Oregon Inlet;
13. The possibility of establishing a motor oil recycling program;
14. The need to recycle pulp mill effluent so that there are no discharges into the spawning grounds of herring, perch, and rockfish;
15. Problems with the notification process for issuing CAMA permits;
16. The dangers of tributyltin and federal legislation enacted to prohibit its use on sporting vessels;
17. The need to give public notice of an application for a nondischarge permit;
18. The feasibility of ocean outfall as a solution for wastewater discharges;
19. The plight of the Currituck Sound; and
20. The plight of Shallow Bag Bay around Manteo.

After giving careful study and consideration to each of the issues above, the Committee determined that immediate action should be taken on two of the issues, the Red Tide issue, as discussed above, and the stabilization of the Oregon Inlet. In both instances the Committee wrote letters to the Governor and North Carolina Congressional delegation recommending a course of action to be taken. Copies of those letters are included in Appendices C and D.

Findings and recommendations concerning the remaining issues follow.

FINDINGS AND RECOMMENDATIONS

The Committee makes the following findings and recommendations. The first ten recommendations include legislative proposals which are located at the end of this section.

1. Recommendation: The Coastal Water Quality Committee should be continued as provided in Legislative Proposal 1.

As indicated in the proceedings numerous topics concerning coastal water quality were brought to the Committee's attention. While the Committee diligently tried to consider each item listed, the Committee found that many are complex issues that require more time to study than was available to this Committee. In addition, the Committee found that many of these issues require continued monitoring.

2. Recommendation: The membership requirements for the Environmental Management Commission should be modified to include a person with scientific expertise in air pollution and a person with scientific expertise in aquatic sciences. The descriptions for certain other members should be clarified to reflect better the various areas of expertise needed to deal with current environmental concerns. This recommendation is included in Legislative Proposal 2.

The Committee found that the membership requirements for the Environmental Management Commission have not been updated for several years. The qualifications for members as currently stated does not adequately address the many areas of expertise required to fully understand the complex environmental problems that need to be addressed by the Commission today. Specialized training and knowledge concerning environmental matters has become a critical part of many academic disciplines and

industries. The Committee finds that the Commission needs assurance that it has access to this specialized knowledge by having members with background and expertise in those areas.

3. Recommendation: The Coastal Resources Commission membership should be modified so that the membership reflects a broader understanding and knowledge of environmental and developmental issues affecting the State's coast and ensures a balanced interest by the membership in those issues as provided in Legislative Proposal 3.

The Committee found that a membership with balanced interest and background is needed to properly protect the State's coastal interests.

4. Recommendation: The Department of Human Resources should develop a motor oil recycling program by January 1, 1990, and should report to the Joint Legislative Committee on Governmental Operations concerning the plan and its development. This recommendation is set out in Legislative Proposal 4.

The Committee found that recycling of motor oil was a concern expressed by several people at the public hearings conducted. One person pointed out that while recycling may not be cheaper initially, a recycling program would be cheaper in the long run than ruining the State's water and environment.

5. Recommendation. The Coastal Resources Commission should extend the Area of Environmental Concern around Outstanding Resource Waters and primary nursery areas from 75 feet to 575 feet as provided in Legislative Proposal 5.

The Committee found that these areas are unique because of their pristine and unpolluted state. It is, therefore, crucial to make every effort to maintain those specially designated environments.

6. Recommendation: The Environmental Management Commission is directed to phase-in Statewide storm-water regulations as provided in Legislative Proposal 6.

Currently stormwater regulations are applicable only in the coastal counties and a few water supply areas. The Committee found that stormwater standards are essential Statewide to protect environmentally sensitive areas in all of the State's counties and that these regulations should be phased in so that protection of the most crucial areas is addressed first.

7. Recommendation: Public notice should be given of proposed modifications to an application for a CAMA permit and of proposed modifications to a previously issued CAMA permit as provided in Legislative Proposal 7.

The Committee found that the proposed modifications to CAMA applications or permits are often as significant in their environmental impact on an area as the development outline in the original application. However, there is no current requirement that such modifications be brought to the attention of the public. To protect the public interest, notice should be given of such modifications.

8. Recommendation: The cumulative impact or combined effects of projects, including reasonable future development, should be considered by the Department of Natural Resources and Community Development in its decisions to issue permits under both CAMA and G.S. 143-215.1(b). This recommendation is set out in Legislative Proposal 8.

The Committee found that to achieve the goals of the State environmental laws it is necessary that the Department of Natural Resources and Community Development require that permit applicants achieve their project purposes using alternatives that minimize impact on public resources and that the cumulative or combined effects of projects including reasonable future development, be considered in permit decisions.

9. Recommendation: The Legislative Research Commission should make a comprehensive study and evaluation of the Albemarle-Pamlico Estuarine Study to

monitor its progress and evaluate its recommendations. This recommendation is set out in Legislative Proposal 9.

Testimony presented to the Committee suggested there is some dissatisfaction with the administration of and results achieved by the Albemarle-Pamlico Estuarine Study. The Committee found this to be a very valuable study and determined that the data this study was created to collect is essential for future understanding of ways to conserve and protect State water and wildlife resources.

10. Recommendation: Public notice should be given of an application for a permit or renewal of a permit for certain types of nonsurface discharge permits as proposed in Legislative Proposal 10.

Currently there is no public notice requirement when an application for a permit for a nonsurface discharge permit is submitted to the Department of Natural Resources and Community Development. There are however public notice requirements for surface discharge applications. The Committee found that often a nonsurface discharge may be as environmentally significant as a surface discharge and could have similar effects on the general public. The public therefore, should be informed when an application for a nonsurface discharge permit is requested.

11. Recommendation: The issue of discharging or dumping waste material into the ocean should be studied further by the Coastal Water Quality Legislative Study Committee. The Committee found this issue to be significant because it affects the health and welfare of the citizens of North Carolina and because it affects the State economically by damaging the tourism industry. The Committee found the issue of ocean dumping to be a complex one with various State and federal laws and rules regulating some of the problems. The Committee found that further study is needed to clarify the jurisdiction among agencies concerning this problem and to determine what,

if any, new laws or regulations are needed to adequately address the ocean dumping problem.

12. Recommendation: The Agricultural Cost Share Program of the Division of Soil and Water Conservation, Department of Natural Resources and Community Development should be expanded. The program should definitely be expanded to include the counties of Vance, Warren, Halifax, Edgecombe and Martin, if possible should also be expanded to those counties in the Cape Fear Basin. If additional staff and funding are deemed necessary to achieve the expansion of the program, the necessary appropriations should be made to the Department of Natural Resources and Community Development for the Agricultural Cost Share Program.

The Committee found this program to be one of the State's most successful programs established to protect the environment. It also found the program to be popular with the general public.

12.5. Recommendation: The Forest Development Program administered by the Department of Natural Resources and Community Development should also be expanded and additional funds should be appropriated to help support this program.

The Committee found that forestry conservation practices are also critical in preserving and protecting water quality. The Committee further found that the Forest Development Program encourages private individuals and others to use approved practices that will insure both maximum forest productivity and environmental protection.

13. Recommendation: CAMA permits should be issued as expeditiously as possible. To achieve this result the Committee recommends that the additional personnel required to evaluate carefully permit applications and to monitor coastal waters for compliance with permit conditions and State standards be provided to the Department of Natural Resources and Community Development.

14. Recommendation: The Committee supports consolidation of the environmental health and natural resources divisions under one department as recommended by the Environmental Review Commission of the General Assembly.

15. Recommendation: The Environmental Management Commission should report regularly to the Coastal Water Quality Legislative Study Committee on its progress in assigning Outstanding Resource Water Classifications to those waters nominated.

The Committee found this to be an issue of great public interest in conducting its public hearings. The Committee also found that these unpolluted waters must be guarded carefully for the public and a good faith attempt is necessary to maintain the pristine condition of these resources.

LEGISLATIVE PROPOSALS

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1989

H

D

Proposal 1

HOUSE JOINT RESOLUTION 89-lh-34

(THIS IS A DRAFT AND NOT READY FOR INTRODUCTION)

Sponsors: Representative Bowman.
Senator Basnight.

Referred to:

1 A JOINT RESOLUTION REQUESTING THE LEGISLATIVE RESEARCH COMMISSION
2 TO CONTINUE THE STUDY OF COASTAL WATER QUALITY.

3 Be it resolved by the House of Representatives, the Senate
4 concurring:

5 Section 1. The Legislative Research Commission may
6 continue the study of coastal water quality begun pursuant to
7 Section 152 of Chapter 1014 of the 1986 Session Laws. The
8 Commission may review and evaluate existing and proposed rules of
9 the Environmental Management Commission, the Coastal Resources
10 Commission, the Marine Fisheries Commission, and any other State
11 agency regarding coastal water. The Legislative Research
12 Commission may also consider any other issues relevant to coastal
13 water quality.

14 Sec. 2. The Legislative Research Commission may make an
15 interim report on the study authorized by this act to the 1989
16 General Assembly, Regular Session 1990, and may make a final
17 report to the 1991 General Assembly.

18 Sec. 3. This resolution is effective upon ratification.
19

Explanation of Proposal 1 (89-lh-34)

This resolution authorizes the Legislative Research Commission to continue its study of coastal water quality. The Study Committee may make an interim report to the 1989 General Assembly during its Regular Session in 1990, and may make a final report to the 1991 General Assembly.

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1989

H

D

Proposal 2 (89-1h-35)
(THIS IS A DRAFT AND NOT READY FOR INTRODUCTION)

Short Title: EMC Membership Change.

(Public)

Sponsors: Representative Bowman.
Senator Basnight.

Referred to:

1 A BILL TO BE ENTITLED

2 AN ACT TO MODIFY THE MEMBERSHIP OF THE ENVIRONMENTAL MANAGEMENT
3 COMMISSION.

4 The General Assembly of North Carolina enacts:

5 Section 1. G.S. 143B-283(a) reads as rewritten:

6 "(a) The Environmental Management Commission shall consist of
7 13 members appointed by the Governor. The Governor shall select
8 the members so that the membership of the Commission shall
9 consist of:

10 (1) One who shall be a licensed physician;

11 (2) One who shall, at the time of appointment, be actively
12 connected with the Commission for Health Services or local board
13 of health or have experience in health sciences; ~~have had~~
14 ~~experience in water and air pollution control activities;~~

15 (3) One who shall, at the time of appointment, be actively
16 connected with or have had experience in agriculture or
17 agricultural sciences;

18 (4) One who shall, at the time of appointment, be a registered
19 engineer experienced in water supply or water or air pollution

~~1 control; the planning or conservation of water or air resources,
2 or planning of water or sewer systems, or having experience in
3 the field of industrial water supply or water and air pollution
4 control, or have had practical experience in water supply and
5 water and air pollution control problems of municipal government;~~

6 (5) One who shall, at the time of appointment, be actively
7 connected with or have had experience in the fish and wildlife
8 conservation activities of the State;

9 (6) One who shall, at the time of appointment, have special
10 training and scientific expertise in groundwater hydrology or
11 groundwater pollution control; be actively connected with or
12 knowledgeable in the groundwater industry;

13 (7) ~~Five~~ Three members interested in water and air pollution
14 control, appointed from the public at large;

15 (8) One who shall, at the time of appointment, be actively
16 connected with industrial production or have had experience in
17 the field of industrial air and water pollution control; and

18 (9) One who shall, at the time of appointment, be actively
19 connected with or have had experience in pollution control
20 problems of municipal or county ~~government, government;~~

21 (10) One who shall, at the time of appointment, have special
22 training and scientific expertise in the effects of air pollution
23 and air pollution control; and

24 (11) One who shall, at the time of appointment, have special
25 training and scientific expertise in freshwater, estuarine,
26 marine biological, or ecological sciences."

27 Sec. 2. This act is effective upon ratification.
28 However, Commission members serving on the Environmental
29 Management Commission on the date of ratification shall be
30 eligible to complete their respective terms.

Explanation of Proposal 2 (89-lh-35)

This bill modifies the membership of the Environmental Management Commission, but leaves the total number of members at 17 as provided under current law. The modifications in subdivisions (2) through (6) clarify and in some instances slightly change the type of expertise a person must have to be eligible for membership on the Commission. For the most part the modifications refine the qualifications of members, requiring persons with specific types of knowledge or background rather than general.

The change in subdivision (7) reduces the number of members at large who may be appointed from five to three. Subdivision (10) is new and provides for the appointment of a person with training and scientific expertise in the effects of air pollution and air pollution control. This appointment takes the place of one of the former member at large positions. Subdivision (11) is also new and provides for the appointment of a person with special training and scientific expertise in aquatic sciences. This also replaces one of the former member-at-large positions.

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1989

H

D

Proposal 3 (89-1h-36)
(THIS IS A DRAFT AND NOT READY FOR INTRODUCTION)

Short Title: CRC Membership Changes.

(Public)

Sponsors: Representative Bowman.
Senator Basnight.

Referred to:

1 A BILL TO BE ENTITLED
2 AN ACT TO MODIFY THE MEMBERSHIP QUALIFICATIONS OF THE COASTAL
3 RESOURCES COMMISSION.
4 The General Assembly of North Carolina enacts:
5 Section 1. G.S. 113A-104 reads as rewritten:
6 "§ 113A-104. Coastal Resources Commission.
7 (a) Established. -- The General Assembly hereby establishes
8 within the Department of Natural Resources and Community
9 Development a commission to be designated the Coastal Resources
10 Commission.
11 (b) Composition. -- The Coastal Resources Commission shall
12 consist of 15 members appointed by the Governor, as follows:
13 (1) One who shall at the time of appointment be
14 actively connected with or have experience in
15 commercial fishing.
16 (2) One who shall at the time of appointment be
17 actively connected with or have experience in
18 wildlife or sports fishing.

- 1 (3) One who shall at the time of appointment be
2 actively connected with or have experience in
3 marine ecology.
- 4 (4) One who shall at the time of appointment be
5 actively connected with or have experience in
6 coastal agriculture.
- 7 (5) One who shall at the time of appointment be
8 actively connected with or have experience in
9 coastal forestry.
- 10 (6) One who shall at the time of appointment be
11 actively connected with or have experience in
12 coastal land development.
- 13 (7) One who shall at the time of appointment be
14 actively connected with or have experience in
15 marine-related business (other than fishing and
16 wildlife).
- 17 (8) One who shall at the time of appointment be
18 actively connected with or have experience in
19 engineering in the coastal area.
- 20 (9) One who shall at the time of appointment be
21 actively associated with a State or national
22 conservation organization.
- 23 (10) One who shall at the time of appointment be
24 actively connected with or have experience in
25 financing of coastal land development.
- 26 (11) Two who shall at the time of appointment be
27 actively connected with or have experience in local
28 government within the coastal area.
- 29 (12) Three at-large members.
- 30 (c) Appointment of Members. -- Appointments to the Commission
31 shall be made to provide knowledge and experience in a diverse
32 range of coastal interests. The members of the Commission shall
33 serve and act on the Commission solely for the best interests of
34 the public and public trust, and shall bring their particular
35 knowledge and experience to the Commission for that end alone.

1 The Governor shall appoint in his sole discretion those
2 members of the Commission whose qualifications are described in
3 subdivisions (6) and (10), and one of the three members described
4 in subdivision (12) of subsection (b) of this section.

5 The remaining members of the Commission shall be appointed by
6 the Governor after completion of the nominating procedures
7 prescribed by subsection (d) of this section. The members of
8 the Commission whose qualification are described in subdivisions
9 (1) through (5), (9), and (11), and at least two of the members
10 described in subdivision (12) of subsection (b) of this section,
11 shall not have income derived from land development,
12 construction, real estate sales, lobbying or otherwise serving as
13 an agent for development interests, or other development related
14 business activities.

15 (d) Nominations for Membership. -- On or before May 1 in every
16 even-numbered year the Governor shall designate and transmit to
17 the board of commissioners in each county in the coastal area
18 four nominating categories applicable to that county for that
19 year. Said nominating categories shall be selected by the
20 Governor from among the categories represented, respectively by
21 subdivisions (1), (2), (3), (4), (5), (7), (8), (9), (11) -- two
22 persons, and (12) -- two persons, of subsection (b) of this
23 section (or so many of the above-listed paragraphs as may
24 correspond to vacancies by expiration of term that are subject to
25 being filled in that year). On or before June 1 in every
26 even-numbered year the board of commissioners of each county in
27 the coastal area shall nominate (and transmit to the Governor the
28 names of) one qualified person in each of the four nominating
29 categories that was designated by the Governor for that county
30 for that year. In designating nominating categories from biennium
31 to biennium, the Governor shall equitably rotate said categories
32 among the several counties of the coastal area as in his judgment
33 he deems best; and he shall assign, as near as may be, an even
34 number of nominees to each nominating category and shall assign
35 in his best judgment any excess above such even number of

1 nominees. On or before June 1 in every even-numbered year the
2 governing body of each incorporated city within the coastal area
3 shall nominate and transmit to the Governor the name of one
4 person as a nominee to the Commission. In making nominations, the
5 boards of county commissioners and city governing bodies shall
6 give due consideration to the nomination of women and minorities.
7 The Governor shall appoint 12 persons from among said city and
8 county nominees to the Commission. The several boards of county
9 commissioners and city governing bodies shall transmit the names,
10 addresses, and a brief summary of the qualifications of their
11 nominees to the Governor on or before June 1 in each
12 even-numbered year, beginning in 1974; provided, that the
13 Governor, by registered or certified mail, shall notify the
14 chairman or the mayors of the said local governing boards by May
15 20 in each such even-numbered year of the duties of local
16 governing boards under this sentence. If any board of
17 commissioners or city governing body fails to transmit its list
18 of nominations to the Governor by June 1, the Governor may add to
19 the nominations a list of qualified nominees in lieu of those
20 that were not transmitted by the board of commissioners or city
21 governing body; Provided however, the Governor may not add to the
22 list a nominee in lieu of one not transmitted by an incorporated
23 city within the coastal area that neither has a population of
24 2,000 or more nor is contiguous with the Atlantic Ocean. Within
25 the meaning of this section, the "governing body" is the mayor
26 and council of a city as defined in G.S. 160A-66. The population
27 of cities shall be determined according to the most recent annual
28 estimates of population as certified to the Secretary of Revenue
29 by the Secretary of Administration.

30 (e) Residential Qualifications. -- All nominees of the several
31 boards of county commissioners and city governing bodies must
32 reside within the coastal area, but need not reside in the county
33 from which they were nominated. No more than one of those members
34 appointed by the Governor from among said nominees may reside in
35 a particular county. No more than two members of the entire

1 Commission, at any time, may reside in a particular county. No
2 more than two members of the entire Commission, at any time, may
3 reside outside the coastal area.

4 (f) Office May Be Held Concurrently with Others. -- Membership
5 on the Coastal Resources Commission is hereby declared to be an
6 office that may be held concurrently with other elective or
7 appointive offices in addition to the maximum number of offices
8 permitted to be held by one person under G.S. 128-1.1.

9 (g) Terms. -- The members shall serve staggered terms of office
10 of four years. At the expiration of each member's term, the
11 Governor, shall reappoint or replace the member with a new member
12 of like qualification (as specified in subsection (b) of this
13 section), in the manner provided by subsections (c) and (d) of
14 this section. The initial term shall be determined by the
15 Governor in accordance with customary practice but eight of the
16 initial members shall be appointed for two years and seven for
17 four years.

18 (h) Vacancies. -- In the event of a vacancy arising otherwise
19 than by expiration of term, the Governor shall appoint a
20 successor of like qualification (as specified in subsection (b)
21 of this section) who shall then serve the remainder of his
22 predecessor's term. When any such vacancy arises, the Governor
23 shall immediately notify the board of commissioners of each
24 county in the coastal area and the governing body of each
25 incorporated city within the coastal area. Within 30 days after
26 receipt of such notification each such county board and city
27 governing body shall nominate and transmit to the Governor the
28 name and address of one person who is qualified in the category
29 represented by the position to be filled, together with a brief
30 summary of the qualifications of the nominee. The Governor shall
31 make the appointment from among said city and county nominees. If
32 any county board or city governing body fails to make a timely
33 transmittal of its nominee, the Governor may add to the
34 nominations a qualified person in lieu of said nominee; Provided
35 however, the Governor may not add to the list a nominee in lieu

1 of one not transmitted by an incorporated city within the coastal
2 area that neither has a population of 2,000 or more nor is
3 contiguous with the Atlantic Ocean.

4 (i) Officers. -- The chairman shall be designated by the
5 Governor from among the members of the Commission to serve as
6 chairman at the pleasure of the Governor. The vice-chairman shall
7 be elected by and from the members of the Commission and shall
8 serve for a term of two years or until the expiration of his
9 regularly appointed term.

10 (j) Compensation. -- The members of the Commission shall
11 receive per diem and necessary travel and subsistence expenses in
12 accordance with the provisions of G.S. 138-5.

13 (k) In making appointments to and filling vacancies upon the
14 Commission, the Governor shall give due consideration to securing
15 appropriate representation of women and minorities.

16 (l) Regular attendance at Commission meetings is a duty of each
17 member. The Commission shall develop procedures for declaring any
18 seat on the Commission to be vacant upon failure by a member to
19 perform this duty."

20 Sec. 2. This act is effective upon ratification.
21 However, members serving on the Coastal Resources Commission at
22 the date of ratification shall be eligible to complete their
23 respective terms.

Explanation of Legislative Proposal 3 (89-1h-36)

This bill amends subsection (c) of G.S. 113A-104 only. The remaining subsections are set out to provide the context of the changes in subsection (c). The first paragraph in subsection (c) is new; it is a policy statement clarifying that a wide range of knowledge and experience is needed on the Coastal Resources Commission and that the chief responsibility of the Commission members is to protect the interest of the public.

The second paragraph contains the language that currently appears in subsection (c). The format is changed but there are no substantive changes in that paragraph.

The third paragraph of subsection (c) begins with the statement currently in the law that indicates that the appointment of certain members is to be done in accordance with the nominating process set out in G.S. 113A-104(d). The new language in the paragraph provides that membership positions in specified categories may not be filled by people who have a business interest in construction, real estate sales, or development-related industries.

GENERAL ASSEMBLY OF NORTH CAROLINA

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H

D

Proposal 4 (89-lh-37)
(THIS IS A DRAFT AND NOT READY FOR INTRODUCTION)

Short Title: Oil Recycling Program.

(Public)

Sponsors: Representative Bowman.
Senator Basnight.

Referred to:

1 A BILL TO BE ENTITLED
2 AN ACT TO DIRECT THE DEPARTMENT OF HUMAN RESOURCES, SOLID WASTE
3 MANAGEMENT SECTION, TO DEVELOP A MOTOR OIL RECYCLING PROGRAM.
4 The General Assembly of North Carolina enacts:
5 Section 1. The Department of Human Resources shall
6 develop by January 1, 1990, a motor oil recycling program to be
7 implemented on a Statewide basis no later than July 1, 1990. In
8 devising the plan the Department shall address the problems of
9 providing accessible pick-up stations for citizens located in
10 rural and urban areas of the State, collecting the oil from the
11 pick-up stations, and selecting recycling options for the used
12 oil. The Department shall also address any additional problems
13 that arise in implementing the oil recycling program. The
14 Department shall provide a cost analysis of its proposed plan,
15 but shall also include in the cost analysis the potential damage
16 to the State's environment if a motor oil recycling program is
17 not implemented within the next two years.

1 Sec. 2. The Department of Human Resources shall report
2 to the Joint Legislative Committee on Governmental Operations
3 concerning the plan and its development by September 1, 1989.

4 Sec. 3. This act is effective upon ratification.

Explanation of Proposal 4 (89-lh-37)

This bill authorizes and directs the Department of Human Resources to devise a Statewide program to recycle motor oil. Problems to be considered by the Department in implementing the program include accessibility of pick-up stations in urban and rural areas, collection of oil from these stations, and the best option for the recycling of the oil. Also required is a cost analysis of the program which factors in the damage to the State's environment if a motor oil recycling program is not implemented.

The plan for the program is to be completed by January 1, 1990, and the program is to be implemented by July 1, 1990.

The Department is to report to the Joint Legislative Committee on Governmental Operations on its progress in devising the plan by October 1, 1989.

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SESSION 1989

H

Proposal 5

D

89-1h-38A

(THIS IS A DRAFT AND NOT READY FOR INTRODUCTION)

Short Title: Extend Environmental Concern Area. (Public)

Sponsors: Representative Bowman.
Senator Basnight

Referred to:

A BILL TO BE ENTITLED

AN ACT TO EXTEND THE AREA OF ENVIRONMENTAL CONCERN AROUND
OUTSTANDING RESOURCE WATERS AND PRIMARY NURSERY AREAS TO FIVE
HUNDRED SEVENTY-FIVE FEET.

The General Assembly of North Carolina enacts:

Section 1. G.S. 113A-113(b) is amended by adding two
new subdivisions to read:

"(b) The Commission may designate as areas of environmental
concern any one or more of the following, singly or in
combination:

(1) Coastal wetlands as defined in G.S. 113-230(a);

(2) Estuarine waters, that is, all the water of the Atlantic
Ocean within the boundary of North Carolina and all the waters of
the bays, sounds, rivers, and tributaries thereto seaward of the
dividing line between coastal fishing waters and inland fishing
waters, as set forth in the most recent official published
agreement adopted by the Wildlife Resources Commission and the
Department of Natural Resources and Community Development;

1 (3) Renewable resource areas where uncontrolled or incompatible
2 development which results in the loss or reduction of continued
3 long-range productivity could jeopardize future water, food or
4 fiber requirements of more than local concern, which may include:
5 a. Watersheds or aquifers that are present sources of public
6 water supply, as identified by the Department of Human Resources
7 or Environmental Management Commission, or that are classified
8 for water-supply use pursuant to G.S. 143- 214.1;
9 b. Capacity use areas that have been declared by the
10 Environmental Management Commission pursuant to G.S. 143-
11 215.13(c) and areas wherein said Environmental Management
12 Commission (pursuant to G.S. 143-215.3(d) or 143- 215.3(a)(8))
13 has determined that a generalized condition of water depletion or
14 water or air pollution exists;
15 c. Prime forestry land (sites capable of producing 85 cubic
16 feet per acre-year, or more, of marketable timber), as identified
17 by the Department of Natural Resources and Community Development.
18 (4) Fragile or historic areas, and other areas containing
19 environmental or natural resources of more than local
20 significance, where uncontrolled or incompatible development
21 could result in major or irreversible damage to important
22 historic, cultural, scientific or scenic values or natural
23 systems, which may include:
24 a. Existing national or State parks or forests, wilderness
25 areas, the State Nature and Historic Preserve, or public
26 recreation areas; existing sites that have been acquired for any
27 of the same, as identified by the Secretary of Natural Resources
28 and Community Development; and proposed sites for any of the
29 same, as identified by the Secretary of Natural Resources and
30 Community Development, provided that the proposed site has been
31 formally designated for acquisition by the governmental agency
32 having jurisdiction;
33 b. Present sections of the natural and scenic rivers system;
34 c. Stream segments that have been classified for scientific or
35 research uses by the Environmental Management Commission, or that

1 are proposed to be so classified in a proceeding that is pending
2 before said Environmental Management Commission pursuant to G.S.
3 143-214.1 at the time of the designation of the area of
4 environmental concern;

5 d. Existing wildlife refuges, preserves or management areas,
6 and proposed sites for the same, as identified by the Wildlife
7 Resources Commission, provided that the proposed site has been
8 formally designated for acquisition (as hereinafter defined) or
9 for inclusion in a cooperative agreement by the governmental
10 agency having jurisdiction;

11 e. Complex natural areas surrounded by modified landscapes that
12 do not drastically alter the landscape, such as virgin forest
13 stands within a commercially managed forest, or bogs in an urban
14 complex;

15 f. Areas that sustain remnant species or aberrations in the
16 landscape produced by natural forces, such as rare and endangered
17 botanical or animal species;

18 g. Areas containing unique geological formations, as identified
19 by the State Geologist; and

20 h. Historic places that are listed, or have been approved for
21 listing by the North Carolina Historical Commission, in the
22 National Register of Historic Places pursuant to the National
23 Historic Preservation Act of 1966; historical, archaeological,
24 and other places and properties owned, managed or assisted by the
25 State of North Carolina pursuant to Chapter 121; and properties
26 or areas that are or may be designated by the Secretary of the
27 Interior as registered natural landmarks or as national historic
28 landmarks;

29 (5) Areas such as waterways and lands under or flowed by tidal
30 waters or navigable waters, to which the public may have rights
31 of access or public trust rights, and areas which the State of
32 North Carolina may be authorized to preserve, conserve, or
33 protect under Article XIV, Sec. 5 of the North Carolina
34 Constitution;

1 (6) Natural-hazard areas where uncontrolled or incompatible
2 development could unreasonably endanger life or property, and
3 other areas especially vulnerable to erosion, flooding, or other
4 adverse effects of sand, wind and water, which may include:

5 a. Sand dunes along the Outer Banks;

6 b. Ocean and estuarine beaches and shoreline;

7 c. Floodways and floodplains;

8 d. Areas where geologic and soil conditions are such that there
9 is a substantial possibility of excessive erosion or seismic
10 activity, as identified by the State Geologist;

11 e. Areas with a significant potential for air inversions, as
12 identified by the Environmental Management Commission.

13 (7) Areas which are or may be impacted by key facilities.

14 (8) Outstanding Resource Waters which are certain unique and
15 special surface waters that are of exceptional State or national
16 recreational or ecological significance and have exceptional
17 water quality.

18 (9) Primary nursery areas which are those areas in the
19 estuarine system where initial post-larval development takes
20 place."

21 Sec. 2. Any existing use of land occurring on the date
22 of ratification of this act that is inconsistent with the
23 designation of the land as an area of environmental concern for
24 the outstanding resource waters or with the designation of the
25 land as a primary nursery area may continue to occur at the level
26 that existed on that date.

27 Sec. 3. The area of environmental concern for any
28 outstanding resource waters designated by rule prior to or on the
29 date of ratification of this act is automatically extended to 575
30 feet. The area of environmental concern for any primary nursery
31 area designated by rule prior to or on the date of ratification
32 of this act is automatically extended to 575 feet. The area of
33 environmental concern shall be extended beyond 575 feet if
34 determined necessary by the Environmental Management Commission
35 or the Coastal Resources Commission.

1

Sec. 4. This act is effective upon ratification.

Explanation of Proposal 5 (89-1h-38A)

This bill amends G.S. 113-113(b) by adding two new subdivisions that create two additional areas for which areas of environmental concern may be designated. Those two areas are "outstanding resource waters" and "primary nursery areas." "Outstanding Resources Waters" are unique and special surface waters that have exceptional water quality and are of State or national recreational or ecological significance. "Primary nursery areas" are areas within estuarine systems where initial post-larval development takes place.

Section 2 of the bill allows activities occurring within the area of environmental concern prior to or on the date of ratification of the bill to continue at the same level as that date, even though the activity or use of the land may be inconsistent with the designation of the land as an area of environmental concern.

Section 3 of the bill automatically extends to 575 feet the area of environmental concern of any outstanding resource waters or primary nursery areas designated as such by rule prior to or on the date of ratification. The bill further provides that the area of environmental concern may be extended beyond 575 feet if in the discretion of the Environmental Management Commission or the Coastal Resources Commission a greater extension is needed.

The act is effective upon ratification.

GENERAL ASSEMBLY OF NORTH CAROLINA

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H

D

Proposal 6 (89-1h-44)
(THIS IS A DRAFT AND NOT READY FOR INTRODUCTION)

Short Title: Statewide Stormwater Standards. (Public)

Sponsors: Representative Bowman.
Senator Basnight.

Referred to:

1 A BILL TO BE ENTITLED
2 AN ACT TO AUTHORIZE AND DIRECT THE ENVIRONMENTAL MANAGEMENT
3 COMMISSION TO PHASE IN STATEWIDE STORMWATER REGULATIONS.
4 The General Assembly of North Carolina enacts:
5 Section 1. G.S. 143-215.3(a) is amended by adding a new
6 subdivision to read:
7 "(18) The Commission is authorized and directed to develop and
8 implement a plan to phase in Statewide stormwater regulations.
9 The plan shall be developed by January 1, 1990, and shall be
10 implemented on a priority basis."
11 Sec. 2. This act is effective upon ratification.

Explanation of Proposal 6 (89-1h-44)

This bill authorizes the Environmental Management Commission to develop and adopt a Statewide stormwater program. The program is to be developed by January 1, 1990, and is to be implemented on a priority basis.

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SESSION 1989

H

D

Proposal 7 (89-1h-39)
(THIS IS A DRAFT AND NOT READY FOR INTRODUCTION)

Short Title: Notice/Modify CAMA Permit. (Public)

Sponsors: Representative Bowman.
Senator Basnight.

Referred to:

1 A BILL TO BE ENTITLED
2 AN ACT TO REQUIRE PUBLIC NOTICE WHEN A SIGNIFICANT MODIFICATION
3 IS PROPOSED TO A MAJOR CAMA PERMIT APPLICATION OR TO A
4 PREVIOUSLY ISSUED MAJOR CAMA PERMIT.
5 The General Assembly of North Carolina enacts:
6 Section 1. G.S. 113A-119(b) reads as rewritten:
7 "(b) Upon receipt of an- any application, a significant
8 modification to an application for a major permit, or an
9 application to modify substantially a previously issued major
10 permit, the Secretary shall issue public notice of the proposed
11 development (i) by mailing a copy of the application, applicatio
12 or modification, or a brief description thereof together with a
13 statement indicating where a detailed copy of the proposed
14 development may be inspected, to any citizen or group which has
15 filed a request to be notified of the proposed development, and
16 to any interested State agency; (ii) by posting or causing to be
17 posted a notice at the location of the proposed development
18 stating that an application- application, a modification of an
19 application for a major permit , or an application to modify a

1 previously issued major permit for development has been made,
2 where the application or modification may be inspected, and the
3 time period for comments; and (iii) by publishing notice of the
4 application or modification at least once in one newspaper of
5 general circulation in the county or counties wherein the
6 development would be located at least 20 days before final action
7 on a major permit and at least seven days before final action on
8 a permit under G.S. 113A-121 or before the beginning of the
9 hearing on a permit under G.S. 113A- 122. The notice shall set
10 out that any comments on the development should be submitted to
11 the Secretary by a specified date, not to exceed 15 days from the
12 date of the newspaper publication of the notice or receipt of the
13 mailed notice, whichever is later. Public notice under this
14 subsection is ~~mandatory~~. mandatory, provided however, that public
15 notice is not mandatory for a proposed modification to an
16 application for a minor permit or proposed modification of a
17 previously issued minor permit that does not substantially alter
18 the original project.

19 Sec. 2. This act is effective upon ratification.

Explanation of Legislative Proposal 7 (89-lh-39)

G.S. 113A-119 currently provides that public notice must be given by the Department of Natural Resources and Community Development upon receipt of an application for a permit for development covered under the Coastal Area Management Act (CAMA). G.S. 113A-119 further provides the manner in which public notice is to be given. This bill amends G.S. 113A-119(b) to provide that in addition to new applications filed with the Department of Natural Resources and Community Development for a permit under CAMA, public notice must also be given for significant modifications that are proposed to applications for major CAMA permits already filed with the Department and public notice must be given for modifications proposed to CAMA permits already issued by the Department that substantially alter the purpose of the project. The public notice requirement is not applicable to applications for minor CAMA permits.

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1989

H

D

Proposal 8 (89-1h-40)
(THIS IS A DRAFT AND NOT READY FOR INTRODUCTION)

Short Title: Consider Cumulative Impact.

(Public)

Sponsors: Representative Bowman.
Senator Basnight.

Referred to:

1 A BILL TO BE ENTITLED

2 AN ACT TO REQUIRE THAT CUMULATIVE IMPACT BE CONSIDERED PRIOR TO
3 ISSUING CAMA WATER POLLUTION CONTROL PERMITS.

4 The General Assembly of North Carolina enacts:

5 Section 1. G.S. 113A-120(a) reads as rewritten:

6 "(a) The responsible official or body shall deny an application
7 for a permit upon finding:

8 (1) In the case of coastal wetlands, that the development would
9 contravene an order that has been or could be issued pursuant to
10 G.S. 113-230.

11 (2) In the case of estuarine waters, that a permit for the
12 development would be denied pursuant to G.S. 113-229(e).

13 (3) In the case of a renewable resource area, that the
14 development will result in loss or significant reduction of
15 continued long-range productivity that would jeopardize one or
16 more of the water, food or fiber requirements of more than local
17 concern identified in paragraphs a to c of subsection (b)(3) of
18 G.S. 113A-113.

1 (4) In the case of a fragile or historic area, or other area
2 containing environmental or natural resources of more than local
3 significance, that the development will result in major or
4 irreversible damage to one or more of the historic, cultural,
5 scientific, environmental or scenic values or natural systems
6 identified in paragraphs a to h of subsection (b)(4) of G.S.
7 113A-113.

8 (5) In the case of areas covered by G.S. 113A-113(b)(5), that
9 the development will jeopardize the public rights or interests
10 specified in said subdivision.

11 (6) In the case of natural hazard areas, that the development
12 would occur in one or more of the areas identified in paragraphs
13 a to e of subsection (b)(6) [of G.S. 113A-113] in such a manner
14 as to unreasonably endanger life or property.

15 (7) In the case of areas which are or may be impacted by key
16 facilities, that the development is inconsistent with the State
17 guidelines or the local land-use plans, or would contravene any
18 of the provisions of subdivisions (1) to (6) of this subsection.

19 (8) In any case, that the development is inconsistent with the
20 State guidelines or the local land-use plans.

21 (9) In any case, that there is a practicable alternative that
22 would accomplish the overall project purposes with less adverse
23 impact on the public resources.

24 (10) In any case, that the proposed development would
25 contribute to cumulative effects that would be inconsistent with
26 the guidelines set forth in subdivisions (1) through (9).
27 Cumulative effects are impacts attributable to the collective
28 effects of a number of projects and include the effects of
29 additional development similar to the requested permit in areas
30 available for development in the vicinity and future development
31 consistent with existing or proposed infrastructure."

32 Sec. 2. G.S. 143-215.1(b) reads as rewritten:

33 "(b) Commission's Power as to Permits. -- The Commission shall
34 act on all permits so as to prevent, so far as reasonably
35 possible, considering relevant standards under State and federal

1 laws, any significant increase in pollution of the waters of the
2 State from any new or enlarged sources. The Commission shall
3 also act on all permits so as to prevent violation of water
4 quality standards due to the cumulative effects of permit
5 decisions. Cumulative effects are impacts attributable to the
6 collective effects of a number of projects and include the
7 effects of additional projects similar to the requested permit in
8 areas available for development in the vicinity and future
9 development consistent with existing or proposed infrastructure.
10 All permit decisions shall require that the practicable waste
11 treatment and disposal alternative with the least adverse impact
12 on the environment be utilized.

13 The Commission shall have the power:

14 (1) To grant a permit with such conditions attached as
15 the Commission believes necessary to achieve the
16 purposes of this Article;

17 (1a) To require that an applicant satisfy the Commission
18 that the applicant, or any parent or subsidiary
19 corporation if the applicant is a corporation:

20 a. Is financially qualified to carry out the
21 activity for which the permit is required
22 under subsection (a); and

23 b. Has substantially complied with the effluent
24 standards and limitations and waste management
25 treatment practices applicable to any activity
26 in which the applicant has previously engaged,
27 and has been in substantial compliance with
28 other federal and state laws, regulations, and
29 rules for the protection of the environment;

30 (3) To modify or revoke any permit upon not less than
31 60 days' written notice to any person affected.

32 No permit shall be denied and no condition shall be attached to
33 the permit, except when the Commission finds such denial or such
34 conditions necessary to effectuate the purposes of this Article."

1 Sec. 2. This act shall become effective July 1, 1989,
2 and shall apply to permits issued on or after that date.

3

Explanation of Proposal 8 (89-1h-40)

This bill provides that the cumulative impact or effect of a project may be grounds for denying some permit applications under the Coastal Area Management Act or under G.S. 143-215.1. Cumulative effects are defined as impact attributable to the collective effects of a number of projects and include the effects of similar future development in an area. Also to be considered prior to granting a permit is whether there are alternative methods, technologies, or designs or other alternatives that would accomplish the purpose of the proposed development in a less environmentally harmful manner.

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1989

H

D

Proposal 9
HOUSE JOINT RESOLUTION 89-lh-41
(THIS IS A DRAFT AND NOT READY FOR INTRODUCTION)

Sponsors: Representative Bowman.
Senator Basnight.

Referred to:

1 A JOINT RESOLUTION AUTHORIZING THE LEGISLATIVE RESEARCH
2 COMMISSION TO STUDY THE PROGRESS OF THE ALBEMARLE-PAMLICO
3 ESTUARINE STUDY.

4 Be it resolved by the House of Representatives, the Senate
5 concurring:

6 Section 1. The Legislative Research Commission may
7 study and evaluate the Albemarle-Pamlico Estuarine Study being
8 conducted by the State. The Commission may monitor the progress
9 of the Albemarle-Pamlico Estuarine Study, evaluate its
10 recommendations, consider methods to implement the comprehensive
11 conservation management plan to be developed by the Albemarle-
12 Pamlico Estuarine Study, and consider any other items relevant to
13 the Albemarle-Pamlico Estuarine Study. The Committee may make
14 its recommendations and submit an interim report to the 1989
15 General Assembly, Regular Session 1990, and may make a final
16 report to the 1991 General Assembly.

17 Sec. 2. This resolution is effective upon ratification.

Explanation of Proposal 9 (89-lh-41)

This resolution authorizes the Legislative Research Commission to study the Albemarle-Pamlico Estuarine Study being conducted by the State. The Commission may consider a broad range of issues raised by the study. The Commission may report to the 1989 General Assembly, Regular Session 1990, and to the 1991 General Assembly.

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1989

S

D

Proposal 10
87-1h-606B

(THIS IS A DRAFT AND NOT READY FOR INTRODUCTION)

Short Title: Nonsurface discharge permit/notice (Public)

Sponsors: Senator Basnight.
Representative Bowman.

Referred to:

1 A BILL TO BE ENTITLED

2 AN ACT TO REQUIRE THAT PUBLIC NOTICE BE GIVEN OF AN APPLICATION
3 FOR A PERMIT OR FOR RENEWAL OF A PERMIT FOR CERTAIN TYPES OF
4 NONSURFACE DISCHARGES AND TO PROVIDE FOR A PUBLIC HEARING
5 CONCERNING THE ISSUANCE OR RENEWAL OF SUCH A PERMIT IF THE
6 ENVIRONMENTAL MANAGEMENT COMMISSION DETERMINES THAT THERE IS A
7 SIGNIFICANT INTEREST IN HOLDING SUCH A HEARING.

8 The General Assembly of North Carolina enacts:

9 Section 1. G.S. 143-215.1(d) reads as rewritten:

10 "(d) Applications and Permits for Sewer Systems, Sewer System
11 Extensions and Pretreatment Facilities, and for Wastewater
12 Treatment Facilities Not Discharging to the Surface Waters of the
13 State. --

14 (1) All applications for new permits and for
15 renewals of existing permits for sewer systems,
16 sewer system extensions and for disposal systems or
17 treatment works which do not discharge to the
18 surface waters of the State, and all permits or
19 renewals and decisions denying any application for

1 permit or renewal shall be in writing. The
2 Commission shall act on permit applications as
3 quickly as possible. The Commission may conduct any
4 inquiry or investigation it considers necessary
5 before acting on an application and may require an
6 applicant to submit plans, specifications, and
7 other information the Commission considers
8 necessary to evaluate the application. If the
9 Commission fails to act on an application for a
10 permit, including a renewal of a permit, within 90
11 days after the applicant submits all information
12 required by the Commission, the application is
13 considered to be ~~approved.~~ approved, unless
14 provided otherwise by this subsection. Permits and
15 renewals issued in approving such facilities
16 pursuant to this subsection (d) shall be effective
17 until the date specified therein or until rescinded
18 unless modified or revoked by the Commission. Local
19 governmental units to whom pretreatment program
20 authority has been delegated shall establish,
21 maintain, and provide to the public, upon written
22 request, a list of pretreatment applications
23 received.

24 (2) Upon receipt of a complete application by the
25 Department for a permit for any of the following,
26 the Department shall give 14 days notice with an
27 opportunity for written comments prior to any final
28 action granting or denying the permit. Public
29 notice shall be given by publication of the notice
30 one time in a newspaper having general circulation
31 within the county.

- 32 a. A wastewater spray irrigation system for a
33 single family residence;
34 b. A sewer line, interceptor, or collector
35 with a design flow equal to or greater than

1 one hundred thousand gallons per day and a
2 total length equal to or greater than one
3 mile; or

4 c. A pump station equal to or greater than one
5 hundred thousand gallons per day.

6 (3) The Department shall refer each application
7 for permit, or renewal of an existing permit for
8 any of the following to its staff for written
9 evaluation and proposed determination with regard
10 to issuance or denial of the permit. When the
11 Commission receives a determination from its staff
12 regarding the issuance or denial of a permit or
13 renewal of a permit for any of the following, the
14 Commission shall give notice of the application and
15 the proposed determination to the proper State,
16 interstate, and federal agencies, to interested
17 persons, and to the public.

18 a. A new wastewater treatment plant or a plant
19 expansion equal to or greater than thirty
20 thousand gallons per day;

21 b. Any wastewater spray irrigation system,
22 that is not to be used for a single family
23 residence; ;

24 c. Any sludge disposal site;

25 d. Any smaller project that would affect water
26 or lands with special environmental
27 designations such as outstanding resource
28 waters, designated natural areas, wildlife
29 refuges, or State parks;

30 e. Any smaller project with strong public
31 interest as shown by letters or other written
32 materials and specifically designated by the
33 Commission; or

1 f. Any smaller project which has severe,
2 unusual, or precedent-making impacts as
3 determined by the Commission,

4 The Commission shall also provide any other data it
5 considers appropriate to those notified. The
6 Commission shall prescribe the form and content of
7 the notice.

8 The notice shall be given at least 45 days prior
9 to any final action granting or denying the permit.
10 Public notice shall be given by publication of the
11 notice one time in a newspaper having general
12 circulation within the county.

13 (4) If any person desires a public meeting on any
14 application for permit or renewal of an existing
15 permit provided for in this subsection, he shall
16 request one in writing to the Commission within 30
17 days following date of the notice of application.
18 The Commission shall consider all such requests for
19 meeting, and if the Commission determines that
20 there is a significant public interest in holding
21 such meeting, at least 30 days' notice of such
22 meeting shall be given to all persons to whom
23 notice of application was sent and to any other
24 person requesting notice. At least 30 days prior to
25 the date of meeting, the Commission shall also have
26 a copy of the notice of the meeting published at
27 least one time in a newspaper having general
28 circulation in such county. The Commission shall
29 prescribe the form and content of the notices.

30 The Commission shall prescribe the procedures to
31 be followed in such meetings. If the meeting is not
32 conducted by the Commission, detailed minutes of
33 the meeting shall be kept and shall be submitted,
34 along with any other written comments, exhibits or
35 documents presented at the meeting, to the

1 Commission for its consideration prior to final
2 action granting or denying the permit.

3 (5) Not later than 60 days following notice of
4 application or, if a public hearing is held, within
5 90 days following consideration of the matters and
6 things presented at such hearing, the Commission
7 shall grant or deny any application for issuance of
8 a new permit or for renewal of an existing permit.
9 All permits or renewals issued by the Commission
10 and all decisions denying application for permit or
11 renewal shall be in writing.

12 Sec. 2. This act shall become effective July 1, 1989,
13 and shall apply to permits and renewals applied for on or after
14 that date.

Explanation of Proposal 10

(87-1h-606B)

This bill requires the Environmental Management Commission to give public notice of applications received to obtain or renew certain types of permits for nonsurface discharges. Two types of notice are provided in the bill. Public notice with an opportunity for written comments only is to be provided for those permits set out in G.S. 143-215.1(d)(2). Public notice for those permits set out in G.S. 143-215.1(d)(3) must include the proposed action of the Commission concerning the issuance, denial, or renewal of the requested permit. The notice must also include any additional information deemed appropriate by the Commission. A public hearing may be granted on applications for permits set out under G.S. 143-215.1(d)(3), if the Commission determines that there is significant public interest in having a hearing.

Some technical comments on the criteria for the permits listed under G.S. 143-215.1(d)(2) are below.

a. Spray irrigation systems have a relatively high potential to create nuisance conditions and public health threats if they fail. They also have high maintenance requirements. Therefore, for package plant size systems or individual residences, spray irrigation should be used only as a last resort. In all cases, people in the area should know about the proposed system and have a chance to comment on it. Few small

systems can be allowed in an area and adequately protect the environment.

b. and c. A one hundred thousand gallons per day sewer line provides infrastructure for up to 1660 people with current design requirements. The public should be made aware of such proposals.

Some technical comments on the criteria for the permits listed under G.S. 143-215.1(d)(3) are below.

a. State regulations specify design flows of sixty gallons per day per person or 120 gallons per day per bedroom. Thirty thousand gallons per day is 250 bedrooms or up to 500 people. Sewage disposal for 500 people presents potentially significant environmental impacts. In comparison, even surface water discharges of less than thirty thousand gallons per day are required to have public notice.

b. Spray irrigation systems have a relatively high potential to create nuisance conditions and public health threats if they fail. They also have high maintenance requirements. Therefore, for package plant size systems or individual residences, spray irrigation should be used only as a last resort. In all cases, people in the area should know about the proposed system and have a chance to comment on it. Few small systems can be allowed in an area and adequately protect the environment.

c. Sludge disposal poses significant environmental risks. The public should be aware of the small sites as well as

the large ones. If there are a large number of very small sites, questions should be raised about the regulatory program.

d. These special areas deserve special public attention. The Department of Natural Resources and Community Development may want to expand the list of example designations.

e. and f. The public notice requirement for smaller projects is limited to those projects designated by the Environmental Management Commission as requiring public notice, either because of strong public interest as indicated by letters and other written materials or because the project has severe, unusual, or precedent-making impacts.

Public notice for permits under G.S. 143-215.1(3) must be given at least 45 days prior to any final action granting or denying the permit and must be published one time in a newspaper having general circulation within the county.

The bill provides that anyone desiring a public hearing on a project must request one in writing within 30 days following the notice of the permit application. The Environmental Management Commission decides whether to hold a public hearing based on significant public interest in the project. If a hearing is to be held, public notice of the hearing must be given by the Commission 30 days prior to the meeting. Procedures for the meeting are to be prescribed by the Commission.

The bill further sets out the time frames within which the Commission must grant or deny permit applications.

The bill becomes effective July 1, 1989, and applies to permits and renewals applied for on or after that date.

APPENDIX A

GENERAL ASSEMBLY OF NORTH CAROLINA
1987 SESSION
RATIFIED BILL

CHAPTER 873
HOUSE BILL 1

AN ACT TO AUTHORIZE STUDIES BY THE LEGISLATIVE RESEARCH COMMISSION. TO CREATE AND CONTINUE VARIOUS COMMITTEES AND COMMISSIONS, TO MAKE APPROPRIATIONS THEREFOR, AND TO AMEND STATUTORY LAW.

The General Assembly of North Carolina enacts:

PART I. TITLE

Section 1. This act shall be known as "The Study Commissions and Committees Act of 1987."

...

PART II.-----LEGISLATIVE RESEARCH COMMISSION

Sec. 2.1. The Legislative Research Commission may study the topics listed below. Listed with each topic is the 1987 bill or resolution that originally proposed the issue or study and the name of the sponsor. The Commission may consider the original bill or resolution in determining the nature, scope and aspects of the study. The topics are:

...

- (18) Continuation of Study of Coastal Water Quality (H.B.1252-Stamey).

...

Sec. 2.6. Reporting Dates. For each of the topics the Legislative Research Commission decides to study under this act or pursuant to G.S. 120-30.17(1), the Commission may report its findings, together with any recommended legislation to the 1989 General Assembly.

Sec. 2.7. Bills and Resolution References. The listing of the original bill or resolution in this Part is for reference purposes only and shall

not be deemed to have incorporated by reference any of the substantive provisions contained in the original bill or resolution.

. . .

-----EFFECTIVE DATE

Sec. 31. This act is effective on July 1, 1987.

APPENDIX B

MEMBERSHIP OF LRC COMMITTEE ON COASTAL WATER QUALITY

SUBJECT: COASTAL WATER QUALITY STUDY, CONTINUATION OF
Authority: Chapter 873, Part II, § 2.1 (18) (HB 1252-Stamey)
Report by: Legislative Research Commission (Continuation of Coastal Water Quality Study)
Report to: General Assembly
Date: 1989 Session

MEMBERS

Pres. Pro Tem's Appointments

Sen. Marc Basnight, Cochair
Post Office Box 1025
Manteo, NC 27954
(919) 473-3474

Mr. Alfred W. Anderson
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Cape Carteret
Swansboro, NC 28584
(919) 393-2109

Sen. Franklin L. Block
520 Princess Street
Wilmington, NC 28401
(919) 763-3463

Mr. James Fulghum
Post Office Box 724
Wilson, NC 27894-0724
(919) 237-5151

Sen. Kenneth C. Royall, Jr.
Post Office Box 8766
Durham, NC 27707
(919) 489-9191

Staff: Ms. Emily Johnson
Legislative Services Office
(919) 733-6660

Clerk: Ms. Dorothy Crocker
(919) 733-5785 (O)
(919) 787-0742

LRC Member: Rep. Bruce Ethridge

Speaker's Appointments

Rep. J. Fred Bowman, Cochair
814 N. Graham-Hopedale Road
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(919) 228-7521

Rep. Gerald L. Anderson
Post Office Box 568
Bridgeton, NC 28519
(919) 633-2830

Rep. Howard B. Chapin
212 Smaw Road
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(919) 946-3480

Rep. Margaret Stamey
6201 Arnold Road
Raleigh, NC 27607
(919) 851-0495

Rep. R. M. Thompson, Sr.
Chowan Storage, W. Carteret
Edenton, NC 27932
(919) 482-2423

Appendix C

STATE OF NORTH CAROLINA
LEGISLATIVE RESEARCH COMMISSION
STATE LEGISLATIVE BUILDING
RALEIGH 27611



December 10, 1987

The Honorable James G. Martin
Governor of North Carolina
Raleigh, North Carolina

Dear Governor Martin:

Upon motion of Senator Frank Block, the Legislative Research Commission's Coastal Water Quality Study Committee adopted the following motion at its meeting on December 9, 1987, and directed that a copy of the motion be delivered to you on behalf of the Committee: "There is a need for immediate financial assistance for the watermen of coastal Carolina who are affected adversely by the red tide. The Committee requests that the Governor inquire of the Council of State whether there are available to the Council of State funds that can be made available by way of emergency loans to those watermen who are adversely affected by the red tide."

The Committee further directed that copies of the motion as adopted be forwarded to the members of the Council of State, the members of the North Carolina Congressional delegation, the members of the Joint Legislative Committee on Governmental Operations, and the Small Business Administration.

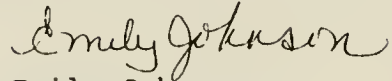
Senator Marc Basnight and Representative Fred Bowman, Cochairmen of the Committee, and Senator Frank Block who made the motion will be glad to talk with you if you want additional information about the motion adopted or the action being requested by the Committee. Their phone numbers are listed below for your information.

Senator Marc Basnight
Home - 919/473-2223
Office - 919/473-3474

Representative J. Fred Bowman
Home - 919/228-7521
Office - 919/228-7521

Senator Frank Block
Home - 919/256-4347
Office - 919/763-3463

Very sincerely yours,

A handwritten signature in cursive script that reads "Emily Johnson". The signature is written in dark ink and is positioned above the typed name and title.

Emily Johnson
Committee Counsel

STATE OF NORTH CAROLINA
LEGISLATIVE RESEARCH COMMISSION
STATE LEGISLATIVE BUILDING
RALEIGH 27611



August 24, 1988

The Honorable Walter B. Jones
House of Representatives
241 Cannon House Office Building
Washington, D. C. 20515

Dear Sir:

Upon motion of Senator Marc Basnight, seconded by Representative Fred Bowman, the Legislative Research Commission's Coastal Water Quality Committee unanimously adopted a motion at its meeting on April 29, 1988, endorsing the construction of jetties at Oregon Inlet for the free passage of recreational and commercial boating traffic. The Committee directed that you be informed of its action endorsing the Oregon Inlet Stabilization project. The Committee also requested that I convey to you the importance and urgency of undertaking and completing the project as quickly as possible.

Senator Marc Basnight and Representative Fred Bowman, Cochairmen of the Committee, will be glad to talk with you about the testimony heard by the Committee concerning this project. Their addresses and phone numbers are listed below for your information:

Senator Marc Basnight
P. O. Box 1025
Manteo, N. C. 27954
Phone 919/473-3474 or 919/473-2223

Representative Fred Bowman
814 N. Graham-Hopedale Road
Burlington, N. C. 27215
Phone 919/228-7521

Sincerely yours,

Emily P. Johnson

Emily P. Johnson
Committee Counsel

APPENDIX E
STATE OF NORTH CAROLINA
LEGISLATIVE RESEARCH COMMISSION
STATE LEGISLATIVE BUILDING
RALEIGH 27611



March 8, 1988

Secretary Thomas Rhodes
Department of Natural Resources and
Community Development
Archdale Building
Raleigh, North Carolina 27611-7687

Dear Secretary Rhodes:

The Coastal Water Quality Legislative Study Committee met in Wilmington on February 1, 1988 to hear the concerns of the citizens of that area about the State's coastal water quality. At the meeting a number of concerns were expressed and questions asked that require a response from the Division of Environmental Management. Those concerns and questions are listed below. The members of the Coastal Water Quality Legislative Study Committee ask that you review the list and respond to each item by March 23, 1988. Please send your responses to me at Room 100, Legislative Office Building, so that I can forward the responses to the committee members and to the appropriate individuals. The Coastal Water Quality Legislative Study Committee will meet again on March 28-29, 1988 in Beaufort, North Carolina. Some of these issues may be discussed again at that time.

1. What action, if any, is being taken toward the preservation of Lea and Huttuff Islands? What is the estimated purchase price of these islands?
2. About two years ago, the Environmental Management Commission was asked to issue a discharge permit in the Wilmington area. The public notice run by the Commission indicated that the proposed discharge would be into the north east Cape Fear River near Highway 117 and the Atlantic Coastline Railroad at

Wilmington. However, the discharge was actually located at Castle Hayne. When citizens questioned the project, they were apparently informed that the notice about the discharge near Highway 117 and the Atlantic Coastline Railroad was sufficient even though the location for the discharge given in the notice was incorrect. The person addressing the committee, stated that at a later meeting, Secretary Rhodes admitted that the permit was a mistake and that it would be corrected. However, to date, nothing has been done to correct the problem. Please indicate whether steps are being taken to correct the situation and if so, please outline what those steps are and state when the problem will be resolved.

3. Please give the Department's interpretation of the following portion of the antidegradation statement which appears in the North Carolina Administrative Code: "...the Environmental Management Commission will not approve any project which would result in the significant degradation of waters whose existing quality is better than the assigned water quality standards".

4. Please explain why the Environmental Management Commission approved a significant discharge into waters with a background dissolved oxygen of 3.5 mg/l when the minimum standard is 5.0 mg/l. (It is my understanding that the discharge was into waters at Castle Hayne.)

5. Does the Division of Environmental Management plot on a map those discharge permits that have been issued so that their proximity to each other is obvious and can easily be taken into consideration when determining whether to issue new discharge permits in a particular area? Even if a map is not used, are the number of discharges already permitted in an area taken into consideration prior to issuing a new permit to discharge? What method is used to keep track of the discharges allowed and their proximity to each other?

6. What percentage of shellfish grounds that were harvestable ten years ago are no longer harvestable today? Where are the grounds that are no longer harvestable located? What caused these grounds not to be harvestable? What, if any, action is being taken to reclaim these shellfish grounds? If no attempt is currently under way to reclaim the grounds, what action would be required to reclaim these grounds and what would the approximate expense be?

7. Please list the number of water quality violations cited in this state and the fines imposed for those violations. Please indicate how many of those fines imposed have been collected to date by the State.

8. Has a discharge permit for Holly Ridge been issued? Please summarize briefly the details of the permit if one has been issued.

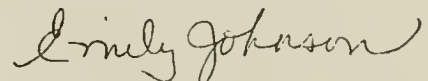
9. Oyster and clam bed lines along the bay side of the Lockwoods Folly River were moved approximately one mile due to heavy pollution. Did the Division of Environmental Management investigate to determine the cause or causes of the pollution? If so, what were the findings?

10. Has the Division of Environmental Management conducted a study to determine what impact, if any, a golf course and the maintenance of a golf course has on water quality? If so, please summarize the findings briefly and make a copy of the study available to the committee. If the Division of Environmental Management has not conducted such a study but is aware of studies done by other organizations or entities that may be helpful, please indicate whom to contact for that information.

11. Has the Division of Environmental Management conducted a study on the cumulative impact of pollution and the effect that it has on water quality? If so, please briefly summarize the findings and make a copy of the study available to the committee. Are there other studies on this topic that you think the committee may find helpful? If so, please indicate how that information may be obtained.

Thank you for your prompt attention to this matter. If you have questions about any of the items, please let me know and I will be glad to talk with you about the information requested.

Sincerely yours,



Emily Johnson
Committee Counsel

cc: Sandra Duke
Katherine Patseavouras

1. The Division of Coastal Management within the Department of Natural Resources and Community Development has been assisting Pender Watch with following the procedures of nominating and designating Lea and Hutaff Islands as areas of environmental concern (aec). Pender Watch has received all forms for nomination from the Division. The designation as an area of environmental concern is usually pursued before seeking to acquire the land.

I have attached sections of the state guidelines for areas of environmental concern. The nomination and designation procedures are described, and the categories of aec's are outlined. These islands would be described as coastal complex natural areas.

SECTION .0500 - NATURAL AND CULTURAL RESOURCE AREAS

.0501 GENERAL

The fourth and final group of AECs is gathered under the heading of fragile coastal natural and cultural resource areas and is defined as areas containing environmental, natural or cultural resources of more than local significance in which uncontrolled or incompatible development could result in major or irreversible damage to natural systems or cultural resources, scientific, educational, or associative values, or aesthetic qualities.

History Note: Statutory Authority G.S. 113A-107(a);
113A-107(b); 113A-113(b)(4e) to (b)(4g);
Eff. September 9, 1977;
Amended Eff. June 1, 1979.

.0502 SIGNIFICANCE

(a) Fragile coastal natural resource areas are generally recognized to be of educational, scientific, or cultural value because of the natural features of the particular site. These features in the coastal area serve to distinguish the area designated from the vast majority of coastal landscape and therein establish its value. Such areas may be key components of systems unique to the coast which act to maintain the integrity of that system.

(b) Areas that contain outstanding examples of coastal processes or habitat areas of significance to the scientific or educational communities are a second type of fragile coastal natural resource area. These areas are essentially self-contained units or "closed systems" minimally dependent upon adjoining areas.

(c) Finally, fragile areas may be particularly important to a locale either in an aesthetic or cultural sense.

(d) Fragile coastal cultural resource areas are generally recognized to be of educational, associative, scientific, aesthetic, or cultural value because of their special importance to our understanding of past human settlement of and interaction with the coastal zone. Their importance serves to distinguish the designated areas as significant among the historic architectural or archaeological remains in the coastal zone, and therein established their value.

History Note: Statutory Authority G.S. 113A-107(a), (b);
113A-113(b)(4e) to (b)(4g);
Eff. September 9, 1977;

Amended Eff. June 1, 1979.

.0503 NOMINATION AND DESIGNATION PROCEDURES

(a) Special Designation Process. The nomination and designation of a coastal complex natural area, a unique coastal geologic formation, a coastal area that sustains remnant species, a significant coastal archaeological resource, or a significant coastal historic architectural resource area of environmental concern shall follow the procedures set forth in this Rule and in GS 113A-115.

(b) Nomination. An area may be nominated by any person or group at any time for Coastal Resources Commission (CRC) consideration. Nominations may, for example, be made by citizens, interest groups, local governments, or state and federal agencies. Nominations should be on a standard form and must be submitted to the division of coastal management (DCM). The nomination shall include relevant information relating to the location, size, importance, ownership, and uniqueness of the proposed site. Nomination forms are available from the division of coastal management.

(c) Preliminary Evaluation. After receipt of a nomination, the division of coastal management will conduct a preliminary evaluation of the proposed site. The land owner, local government, and CRC and CRAC members in whose jurisdiction the site is located will be informed of the proposed nomination. Representatives of these groups will meet to discuss the proposed nomination and will complete a preliminary evaluation within 60 days after receipt of the nomination. Various protection methods shall be examined to determine if AEC designation is appropriate.

(d) CRC Endorsement. A report on the preliminary evaluation shall be presented to the CRC so that it may determine whether to endorse the evaluations and proceed with a more detailed analysis of the site. This report shall be made at the first CRC meeting after the preliminary evaluation is completed. All parties involved in the nomination and preliminary evaluation will be informed, in writing, of the commission's decision to proceed or not to proceed with a detailed review of the site in question. For sites that do not receive CRC endorsement for detailed review, recommendations for some other form of protection may be discussed with the landowner. Other forms of protection include, but are not limited to, registry with the North Carolina Natural Heritage Program, conservation easement to a public agency or to a local conservation foundation, donation or acquisition of title, or other strategies.

(e) Detailed Review. A detailed review of the proposed site will be initiated under DCM supervision after CRC endorsement. This will include the development of a management plan, if

applicable, or site specific use standards. Opportunity shall be given to local government officials, interest groups, and those with scientific expertise to comment on the specific biological/physical or cultural values of the site together with appropriate management strategies to safeguard the values identified. This review shall be completed within 90 days, starting from the date of the official CRC endorsement. At the conclusion of this review, the report on the detailed review will be presented to the CRC for their consideration.

(f) Public Hearing. If, after receiving the detailed review, the CRC decides to consider formal designation of the site as an AEC and adopt the particular management plan and/or use standards developed, a public hearing will be held, within 45 days after the CRC decision, in the county in which the site is located. Notice of any such hearing shall be given not less than 30 days before the date of such hearing. The notice shall state that copies of the site description and of any rules proposed to implement the designation are available for public inspection at the county courthouse of the affected county and at the Raleigh Office of the DCM. At this hearing, the CRC shall present the scientific documentation and general statements in support of the designation decision. Any person who desires to comment on the proposed AEC or any proposed rules may do so at the public hearing or may submit written comments to the CRC within 30 days following the public hearing.

(g) Formal Designation. After consideration of all comments, the commission will make its final judgment. If the site is designed as an AEC, CRC will also adopt a management strategy or use standards applicable to the AEC. Designation is by rule, and will be effective the first day of the second month following CRC designation.

History Note: Statutory Authority G.S. 113A-107(a), (b);
113A-113(b)(4e) through (b)(4h);
Eff. September 9, 1977;
Amended Eff. May 1, 1985;
February 1, 1982; June 1, 1979.

.0504 AECs WITHIN CATEGORY

The description, significance, and management objectives for each AEC (coastal complex natural areas, coastal areas that sustain remnant species, unique coastal geologic formations, significant coastal architectural resources, and significant coastal historic architectural resources) within the grouping of fragile coastal natural and cultural resource areas follows in Regulations .0505, .0506, .0507, .0509, and .0510 of this Section.

History Note: Statutory Authority G.S. 113A-107(a), (b);
113A-113(b)(4e) to (b)(4h);
Eff. September 9, 1977;
Amended Eff. June 1, 1979.

.0505 COASTAL AREAS THAT SUSTAIN REMNANT SPECIES

(a) Description. Coastal areas that sustain remnant species are those areas that support native plants or animals determined to be rare or endangered (synonymous with threatened and endangered), within the coastal area. Such places provide habitats necessary for the survival of existing populations or communities of rare or endangered species within the coastal area. Determination will be made by the commission based upon the listing adopted by the North Carolina Wildlife Resources Commission or the federal government listing; upon written reports or testimony of experts indicating that a species is rare or endangered within the coastal area; and upon consideration of written testimony of local government officials, interest groups, and private land owners.

(b) Significance. The continued survival of certain habitats that support native plants and animals in the coastal area is vital for the preservation of our natural heritage and for the protection of natural diversity which is related to biological stability. These habitats and the species they support provide a valuable educational and scientific resource that cannot be duplicated.

(c) Management Objective. To protect unique habitat conditions that are necessary to the continued survival of threatened and endangered native plants and animals and to minimize land use impacts that might jeopardize these conditions.

History Note: Statutory Authority G.S. 113A-107(a), (b);
113A-113(b)(4)f;
Eff. September 9, 1977.

.0506 COASTAL COMPLEX NATURAL AREAS

(a) Description. Coastal complex natural areas are defined as lands that support native plant and animal communities and provide habitat qualities which have remained essentially unchanged by human activity. Such areas may be either significant components of coastal systems or especially notable habitat areas of scientific, educational, or aesthetic value. They may be surrounded by landscape that has been modified but does not drastically alter conditions within the natural area. Such areas may have been altered by human activity and/or subject to limited future modifications, e.g. the placement of dredge spoil, if the CRC determines that the modifications benefit the

plant or animal habitat or enhance the biological, scientific or educational values which will be protected by designation as an AEC.

(b) Significance. Coastal complex natural areas function as key biological components of natural systems, as important scientific and educational sites, or as valuable scenic or cultural resources. Often these natural areas provide habitat suitable for threatened or endangered species or support plant and animal communities representative of pre-settlement conditions. These areas help provide a historical perspective to changing natural habitats in the coastal area and together are important and irreplaceable scientific and educational resources. The CRC may determine significance of a natural area by consulting the Natural Heritage Priority List. The CRC will establish a standing committee, composed of two or more members of the CRC, one or more members of the CRAC, and three or more members of the Natural Area Advisory Committee, to evaluate areas not included in the Natural Heritage Priority List.

(c) Management Objectives. To protect the features of a designated coastal complex natural area in order to safeguard its biological relationships, educational and scientific values, and aesthetic qualities. Specific objectives for each of these functions shall be related to the following policy statement either singly or in combination:

- (1) To protect the natural conditions or the sites that function as key or unique components of coastal systems. The interactions of various life forms are the foremost concern and include sites that are necessary for the completion of life cycles, areas that function as links to other wildlife areas (wildlife corridors), and localities where the links between biological and physical environments are most fragile.
- (2) To protect the identified scientific and educational values and to ensure that the site will be accessible for related study purposes.
- (3) To protect the values of the designated coastal complex natural area as expressed by the local government and citizenry. These values should be related to the educational and aesthetic qualities of the feature.

History Note: Statutory Authority G.S. 113A-107(a), b;
 113A-113(b)(4)e;
 Eff. September 9, 1977;
 Amended Eff. February 1, 1982.

.0507 UNIQUE COASTAL GEOLOGIC FORMATIONS

2. Prior to the issuance of the NPDES Permit for the North Chase development, a public notice was placed in the local paper. Complaints were subsequently raised that this notice was not legal in that it did not accurately describe the proposed discharge location. Based on these concerns, the Attorney General's Office was asked to rule on the validity of the notice. The ruling was that while the notice was not as clear as it could have been, the people who complained were not adversely impacted since the Division took all of their concerns into account prior to issuing the permit. This decision has been initially upheld by the courts but is still under appeal. The major concern was that frequent swimming was taking place near the proposed discharge and that the proposed permit would not protect this activity. Therefore, limitations were included in the permit to protect waters for swimming even though they were not classified for that usage at the time of permit issuance. However, the waters were reclassified for swimming in August 1987. It should be noted that current North Carolina law and regulations do allow dischargers with adequate treatment and safeguards to swimming waters.

3. To answer this question regarding the state's antidegradation statement, it is necessary to include the remaining portion of the sentence listed in quotations, as follows: "the Environmental Management Commission will not approve any project which would result in the significant degradation of waters whose existing quality is better than the assigned water quality standards, unless such degradation is found by the Commission to be justifiable to provide necessary economic and social development." Hence the statement does not prohibit degradation if it can be "justified", although in no case can degradation result in standard violations. We are currently developing a procedure to better define how to implement the antidegradation statement, and intend to take it to public hearing this summer as part of our triennial review of water quality standards. The concept being proposed is consistent with EPA's antidegradation policy, and has three tiers which can be summarized as follows:

1. Existing uses must be maintained and protected.
2. High quality waters (water quality better than standards) can only be significantly degraded to accomodate important social and economic development.
3. Outstanding Resource Waters (ORW) cannot be degraded.

The two extremes of this tier (number 1 and 3) are straight forward. All waters must maintain sufficient quality to protect the standards, and the quality of ORW waters (high quality waters with some unique and special resource) must be maintained at current levels. It is the middle tier that is difficult to define, for that is where the line is drawn between important or necessary economic development and the amount of degradation that should be allowed to waters with quality better than the standards. The proposed mechanism for handling the middle tier is to define high quality waters and then require proposed wastewater dischargers to these waters to protect background water quality (as opposed to the standard). This procedure is summarized in the following table:

<u>Class</u>	<u>Water Quality</u>	<u>Policy</u>
ORW	Significantly Above Standards and Unique	Severe Restrictions or No New Dischargers
High Quality Waters	Significantly Above Standards	Maintain Existing Water Quality Unless Special Justification
All Other Waters	At or Above Standards	Allow Degradation to Standards

4. The Northeast Cape Fear River is classified C-SWP in the location of the proposed North Chase Subdivision discharge. The North Carolina Administrative Code (15 NCAC 2b .0211) allows for dissolved oxygen levels in swamp waters to have lower values than the daily average standard of 5.0mg/l if caused by natural conditions. Ambient data collected by DEM in this region indicate naturally occurring low levels of dissolved oxygen, which are not uncommon in organically-rich waters.

When naturally occurring levels of dissolved oxygen fall below the standard, DEM reverts to the criteria established by EPA for dissolved oxygen (1984). The national criteria recommend allowing no more than a 10 percent decrease in background dissolved oxygen levels to be attributed to wastewater assimilation, and to prohibit discharge into waters where the dissolved oxygen levels are expected to drop below the one-day minimum for the protection of fish survival (3.0 mg/l for warm waters).

Ambient data collected at Hwy 117 at Castle Hayne between 1980 and 1985 contained 2 dissolved oxygen values (out of 63 total) that fell below 3.0 mg/l. No violations of one-day minimum have occurred since 1981. Modeling analyses of the proposed discharge at 1.0 MGD and effluent characteristics reflecting secondary treatment indicated that the discharge would not have a significant impact (net change = 0.04 mg/l D.O.) on dissolved oxygen in the Northeast Cape Fear. In light of these facts, DEM had no legal rationale for denying an NPDES permit to the proposed facility.

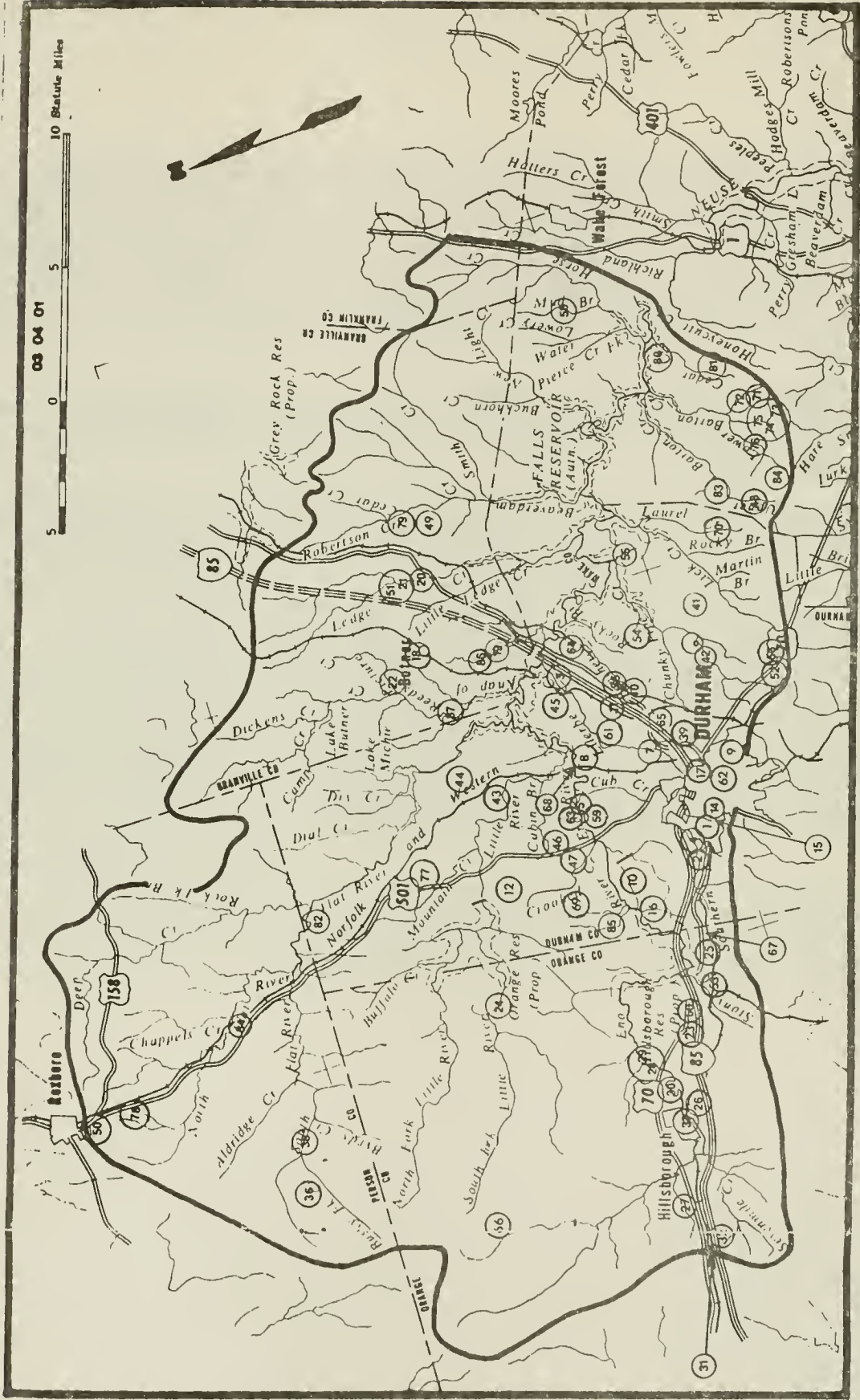
5. When a permit is issued, the facility is located on a 7 1/2 minute topographic map. If the facility is existing and the action is renewal, the point of discharge is re-checked and the latitude and longitude is verified. If the facility is a new facility (existing or proposed), the point is plotted on the topo map and latitude and longitude verified. After each lat/long reading, the information is provided to the Compliance Monitoring Section for updating on the compliance system.

When a facility has ceased operation (discharging, denial, return, never built), the facility is marked in red as CD on the topo map to indicate the facility has ceased discharging for whatever reason.

In addition to this information being provided on the 7 1/2 minute Topo Map, it is maintained in a master file in Technical Services. The river basins are broken down into subbasins. These subbasins have been designated on a miniature-scale map outlining receiving stream areas of the entire state. All discharge point sources are plotted on these miniature-scale maps providing the estimated point of discharge of each facility. The list of dischargers within each subbasin is provided with each map. This list provides the name of the discharge facility, the NPDES Permit Number, the receiving stream, the county, the latitude/longitude reading and the CD column (Y indicating Yes, facility has ceased discharging). This information is stored on an IBM-PC data base for easy accessibility and up-dating of modellers and permit workers.

These files are continually being up-dated and revised to provide DEM with the most accurate system outlining all the discharge facilities within the State of North Carolina. All of these discharges are taken into consideration in determining the amount of waste a new facility can discharge.

10 Statute Miles
5 0 5



Map #	Discharger	Receiving Stream	Latitude	Longitude
14	Kwik Kar Wash #1 NC0031933	UT Ellerbe Creek (Durham)	36°00'02"	78°54'09"
15	Kwik Kar Wash #2 NC0031941	UT Ellerbe Creek (Durham)	36°00'44"	78°55'14"
16	Frank Ward Residence NC0032620	UT Eno River (Durham)	36°03'22"	78°57'58"
17	Southchem, Inc NC0044644	UT Ellerbe Creek (Durham)	36°00'29"	78°52'48"
18	Athol Manufacturing Corp. NC0036846	UT Picture Creek (Granville)	36°08'17"	78°45'01"
19	Coley MHP NC0031968	UT Neuse River (Granville)	36°05'44"	78°46'27"
20	Creedmoor WWTP NC0020125	Ledge Creek (Granville)	36°07'26"	78°42'17"
21	Creedmoor WTP NC0007625	Ledge Creek (Granville)	36°07'41"	78°42'20"
22	Butner WTP NC0058416	Picture Creek (Granville)	36°09'06"	78°46'04"
23	Carden MHP NC0037869	UT Stoney Creek (Orange)	36°03'14"	79°03'29"
24	Gerry M. Cooley Residence NC0044997	South Fork Little River (Orange)	36°10'56"	79°05'46"
25	Triangle Investment Group NC0042242	UT Rhodes Creek (Orange)	36°02'00"	79°00'16"
25	Best Western Skyland Inn NC0061018	UT Rhodes Creek (Orange)	36°02'16"	79°00'16"
26	Economy Motel NC0044628	UT Cates Creek (Orange)	36°03'34"	79°06'14"
27	Efland-Cheeks School NC0031755	UT McCowan Creek (Orange)	36°04'58"	79°11'25"
28	Warren M. Gates Home NC0046990	Eno River (Orange)	36°04'53"	79°04'08"

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Map #	Discharger	Receiving Stream	Latitude	Longitude
1	Burlington Industries NC0007102	UT Ellerbe Creek (Durham)	36°00'42"	78°55'27"
2	Darco Water System NC0028509	Ellerbe Creek (Durham)	36°01'26"	78°57'00"
3	Durham Partners NC0024520	UT Ellerbe Creek (Durham)	36°03'29"	78°47'45"
4	Durham WTP NC0002887	Ellerbe Creek (Durham)	36°01'19"	78°56'15"
5	Durham-Eno River WWTP NC0026336	Eno River (Durham)	36°04'37"	78°53'10"
5	Seterra Point Subdivision NC0049522	Eno River (Durham)	36°04'40"	78°52'57"
6	Durham-Little Lick Creek WWTP NC0026310	Little Lick Creek (Durham)	35°59'13"	78°48'16"
7	Durham-Northside WWTP NC0023841	Ellerbe Creek (Durham)	36°01'46"	78°51'52"
8	Durham Products NC0022853	UT Eno River (Durham)	36°03'40"	78°51'37"
9	Unity Oil company NC0026981	UT Little Lick Creek (Durham)	35°59'07"	78°53'08"
10	Garrard Sausage NC0002437	UT Mill Creek (Durham)	36°03'26"	78°56'55"
11	Gorman Baptist Church NC0043389	UT Ellerbe Creek (Durham)	36°02'37"	78°48'56"
12	John P. Irion Residence NC0030007	UT Little River (Durham)	36°07'04"	78°55'24"
13	Brenda F. Hopkins NC0036170	UT Ellerbe Creek (Durham)	36°01'45"	78°50'52"
14	Liggett & Myers Tobacco Co. NC0003247	UT Ellerbe Creek (Durham)	36°00'10"	78°54'14"

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Map #	Discharger	Receiving Stream	Latitude	Longitude
29	John W. Hartwell Residence NC0046841	Eno River (Orange)	36°05'07"	79°03'42"
30	Hillsborough WWTP NC0026433	Eno River (Orange)	36°04'27"	79°05'24"
31	NC DOT Rest Area SBL NC0024601	UT Sevenmile Creek (Orange)	36°04'43"	79°12'37"
32	NC DOT Rest Area NBL NC0024619	UT Sevenmile Creek (Orange)	36°04'34"	79°12'34"
33	Piedmont Minerals Co. NC0003859	Eno River (Orange)	36°04'15"	79°06'31"
34	Helena Elementary School NC0036471	UT North Flat River (Person)	36°17'18"	78°57'17"
35	Mobile Acres One NC0068756 - A NC0068756 - B	UT Panther Creek (Durham)	36°02'04" 36°02'01"	78°49'40" 78°49'37"
36	Oak Lane Elementary School NC0036501	UT South Flat River (Person)	36°16'32"	79°05'53"
37	W.J. Timberlake NC0039284	UT Flat River (Person)	36°15'52"	78°58'59"
38	Whites Laundry NC0002101	Flat River (Person)	36°16'39"	79°02'43"
39	Merrick-Moore School NC0042960	UT to Ellerbe Creek (Durham)	36°00'31"	78°51'10"
40	Glen Elementary School NC0042951	UT Panther Creek (Durham)	36°01'43"	78°49'55"
41	Neal Junior High School NC0042978	UT to Little Lick Creek (Durham)	35°58'52"	78°47'05"
42	Oak Grove Elementary School NC0042986	Little Lick Creek (Durham)	35°59'03"	78°49'06"
43	Little River Elementary School NC0042994	UT Little River (Durham)	36°08'39"	78°54'30"

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Map #	Discharger	Receiving Stream	Latitude	Longitude
44	Mangum Elementary School NC0042935	UT Flat River (Durham)	36°10'18"	78°52'33"
45	Chewning Junior High School NC0042943	Ellerbe Creek (Durham)	36°03'35"	78°49'07"
46	Mt. Sylvan United Methodist Ch NC0043001	UT to Cabin Branch (Durham)	36°05'53"	78°54'34"
47	Carrington Junior High School NC0043052	UT to Crooked Creek (Durham)	36°04'57"	78°55'02"
48	Canterbury Utility Corp. - Hawthorne Subdivision NC0064645	Upper Barton Creek (Wake)	35°55'53"	78°43'41"
49	Hawley School NC0043095	UT Robertson Creek (Granville)	36°06'22"	78°40'14"
50	Aluminum Coal, Inc. NC0003336	UT North Flat River (Person)	36°22'50"	78°59'25"
51	Mobile Village MHP NC0043648	UT Ledge Creek (Granville)	36°07'58"	78°42'49"
52	Said Service Station NC0059722	UT Little Lick Creek (Durham)	35°57'12"	78°50'28"
53	Stone Gate MHP NC0049808 (Permitted)	Rhodes Creek (Orange)	36°02'00"	79°01'24"
54	Redwood Academy NC0051071	UT Little Lick Creek (Durham)	36°01'18"	78°48'14"
55	Warren F Franks Residence NC0051764	UT Little Lick Creek (Durham)	36°00'33"	78°44'12"
56	McBroom's Rentals, Inc. NC0051772	UT Lick Creek (Durham)	35°57'00"	78°50'15"
57				
58	Durham YMCA-Camp Kanata NC0051136	Mud Branch (Wake)	35°59'53"	78°34'00"

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Map #	Discharger	Receiving Stream	Latitude	Longitude
59	Nello L. Teer Company Durham Quarry NC0066044	UT Eno River (Durham)	36°04'10"	78°53'40"
60	Pete Singer Residence NC0058688	UT Stony Creek (Orange)	36°03'12"	79°02'38"
61	James A. Perry Residence NC0058165	UT Ellerbe Creek (Durham)	36°02'24"	78°50'37"
62	Durham Street Department NC0055425	UT Ellerbe Creek (Durham)	35°59'47"	78°53'05"
63	John Braxton Residence NC0058530	UT Eno River (Durham)	36°04'51"	78°53'28"
64	Lake Ridge Aero Park NC0059099	UT Panther Creek (Durham)	36°03'13"	78°46'44"
65	Bible Baptist Church NC0058785	UT Ellerbe Creek (Durham)	36°01'22"	78°50'55"
66	Phelps Restaurant NC0057291	UT East Fork Eno River (Orange)	36°12'08"	79°08'44"
67	Finch Residence NC0058556	UT Rhodes Creek (Orange)	36°01'51"	78°59'38"
68	Kendall Company NC0056081	UT Eno River (Durham)	36°04'18"	78°51'37"
69	Sedgefield Development - Grand Oaks Subdivision NC0056731	UT Crooked Creek (Durham)	36°05'17"	78°56'38"
70	W.B. Washburn Residence NC0057967	Laurel Creek (Durham)	35°57'09"	78°44'27"
71	Stonebridge Homeowners Assoc. NC0064629	Lower Barton Creek (Wake)	35°54'57"	78°39'31"
72	Stone Creek Subdivision NC0064637	UT Lower Barton Creek (Wake)	35°55'31"	78°39'35"

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Map #	Discharger	Receiving Stream	Latitude	Longitude
73	Heritage Point Homeowners Ass. NC0071161	UT Lower Barton Creek (Wake)	35°54'30"	78°40'31"
74	CAC Utilities, Inc. Wildwood Green Subdivision NC0063614	UT Lower Barton Creek (Wake)	35°54'47"	78°40'47"
75	Woods of Tiffany Pool NC0064661	UT Lower Barton Creek (Wake)	35°55'02"	78°40'37"
75	Colonial Building Co. - Site 1 NC0051390	UT Lower Barton Creek (Wake)	35°55'05"	78°40'39"
76	Colonial Building Co. - Site 2 NC0051403	Lower Barton Creek (Wake)	35°55'19"	78°41'27"
77	Black Horse Run NC0068021	UT Mountain Creek (Durham)	36°10'31"	78°54'00"
78	Eaton Corp. NC0003379	UT North Flat River (Person)	36°21'33"	78°59'13"
79	Kayser-Roth Hosiery, Inc. NC0065021	UT Robertson Creek (Granville)	36°07'11"	78°40'08"
80	The Pointe at Falls Lake NC0064548	UT to Neuse River (Wake)	35°57'30"	78°36'58"
81	Raven Ridge Associates Banbury Woods Swim-Racquet Club NC0064238	UT Cedar Creek (Wake)	35°56'22"	78°37'23"
82	Red Mountain Swim Club NC0070386	UT Upper Flat Creek (Durham)	36°13'47"	78°54'09"
83	Black Horse Run NC0071277	UT Upper Barton Creek (Wake)	35°57'07"	78°42'22"
84	Wood Valley Swim & Racquet Club NC0071021	UT Lower Barton Creek (Wake)	35°55'19"	78°42'55"
85	Roy Gentry Residence NC0058220	Sevenmile Creek (Durham)	36°04'54"	78°58'05"
86	Carolina Sunrock Corp. NC0061549	UT Neuse River (Granville)	36°06'29"	78°46'08"

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Map #	Discharger	Receiving Stream	Latitude	Longitude
87	John Umstead Hospital NC0026824	Knap of Reeds Creek (Granville)	36°07'38"	78°47'57"

7. In the past three years (1985-1987, inclusive), DEM has assessed penalties in as many cases as in the previous eight years combined (Figure 1). This represents an increase of 150 percent in the average number of assessments per year for the last three years over the previous eight years. The amount of the penalties assessed in water quality cases in the last three years represents a 41 percent increase over the total amount assessed in the previous eight years combined (Figure 2). Considering all program areas, the dollar amount of penalties in the past three years represents a 427 percent increase over the total amount of penalties assessed in the previous eight years combined. Fines collected in FY85, FY86, FY87, and the first six months of FY88 are 32 percent greater than the total fines collected in the previous eight fiscal years combined (Figure 3).

Figure 1

Number of Fines Assessed by DEM

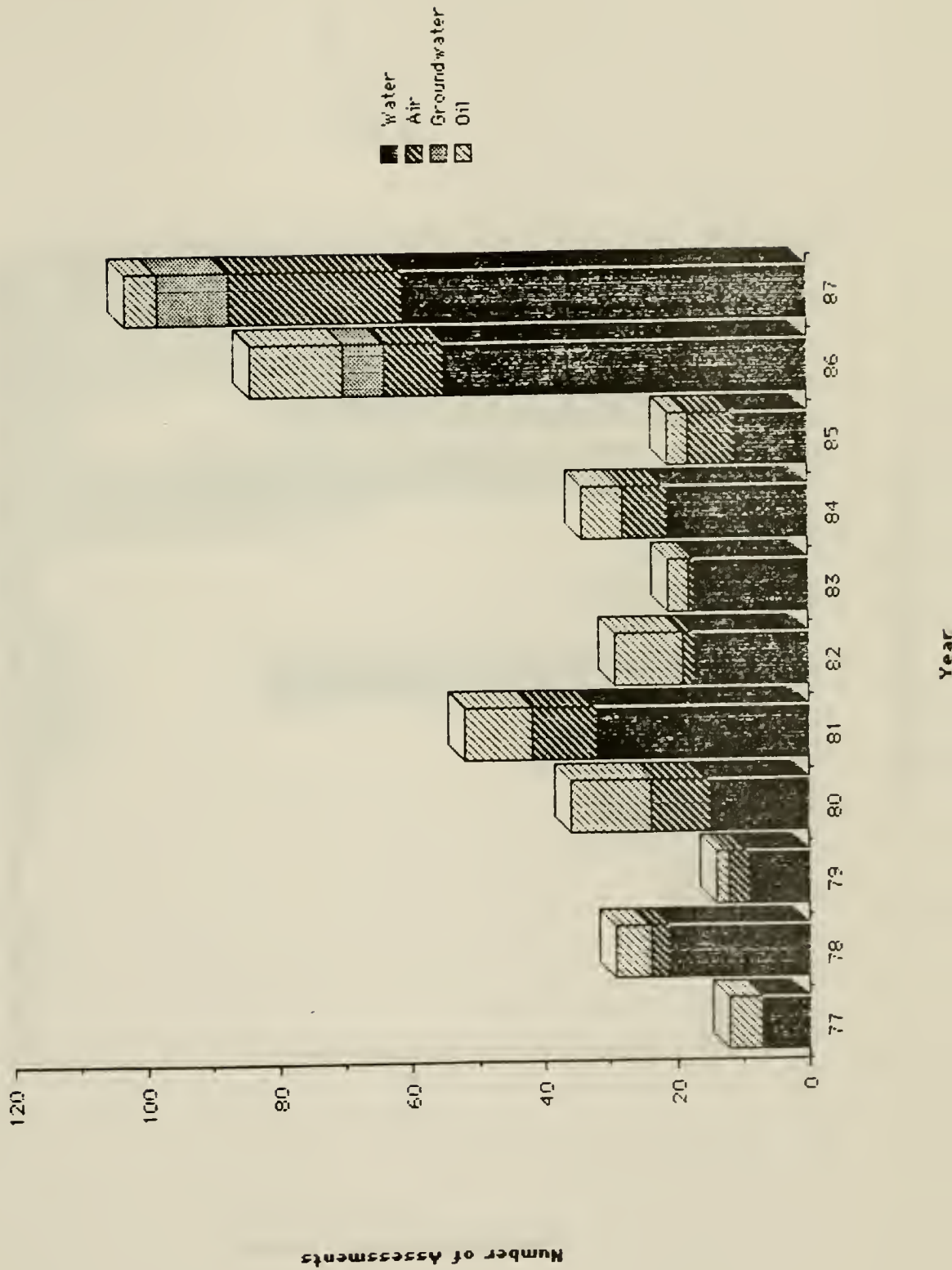


Figure 2

Fines Assessed by DEM

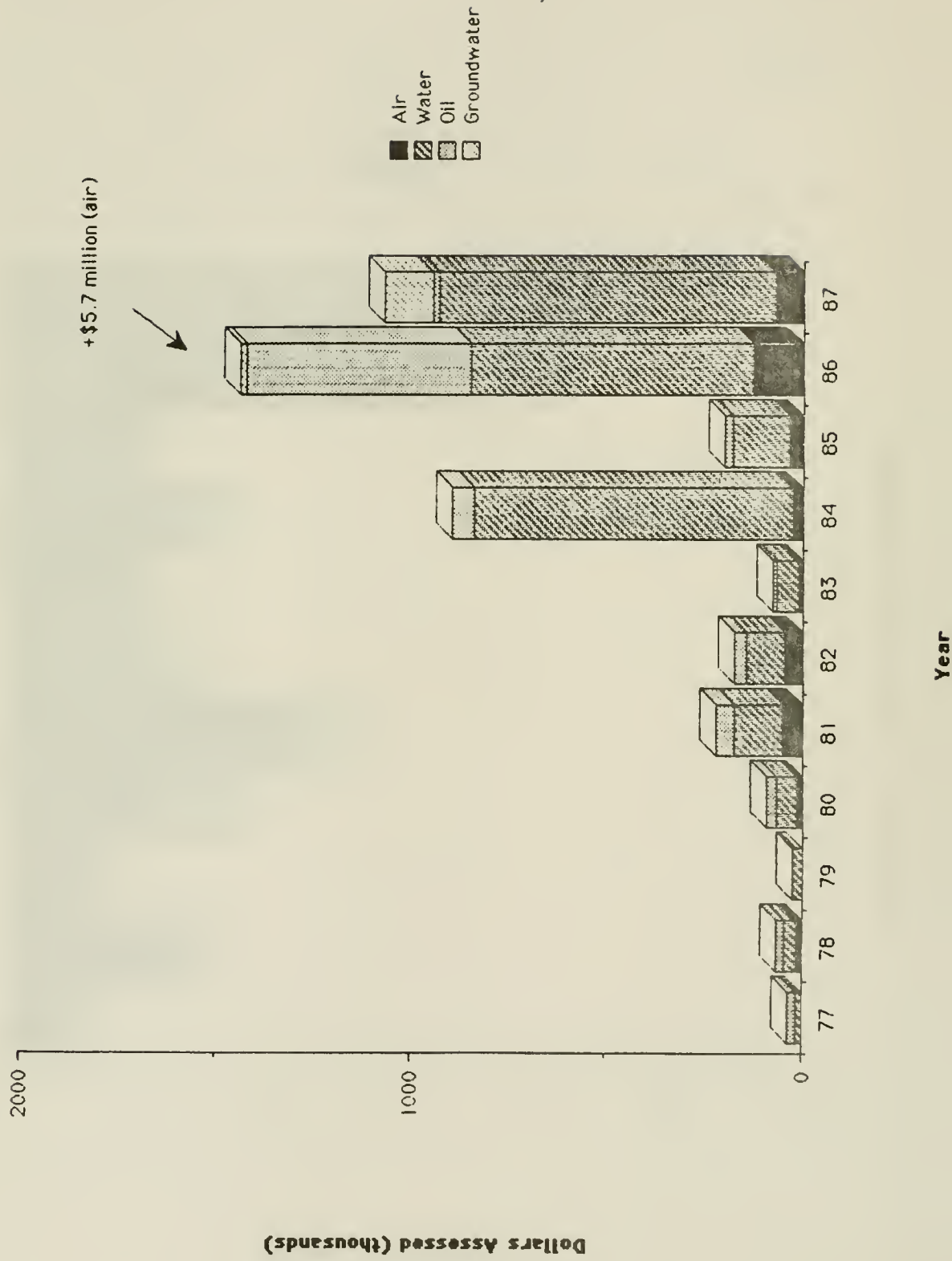
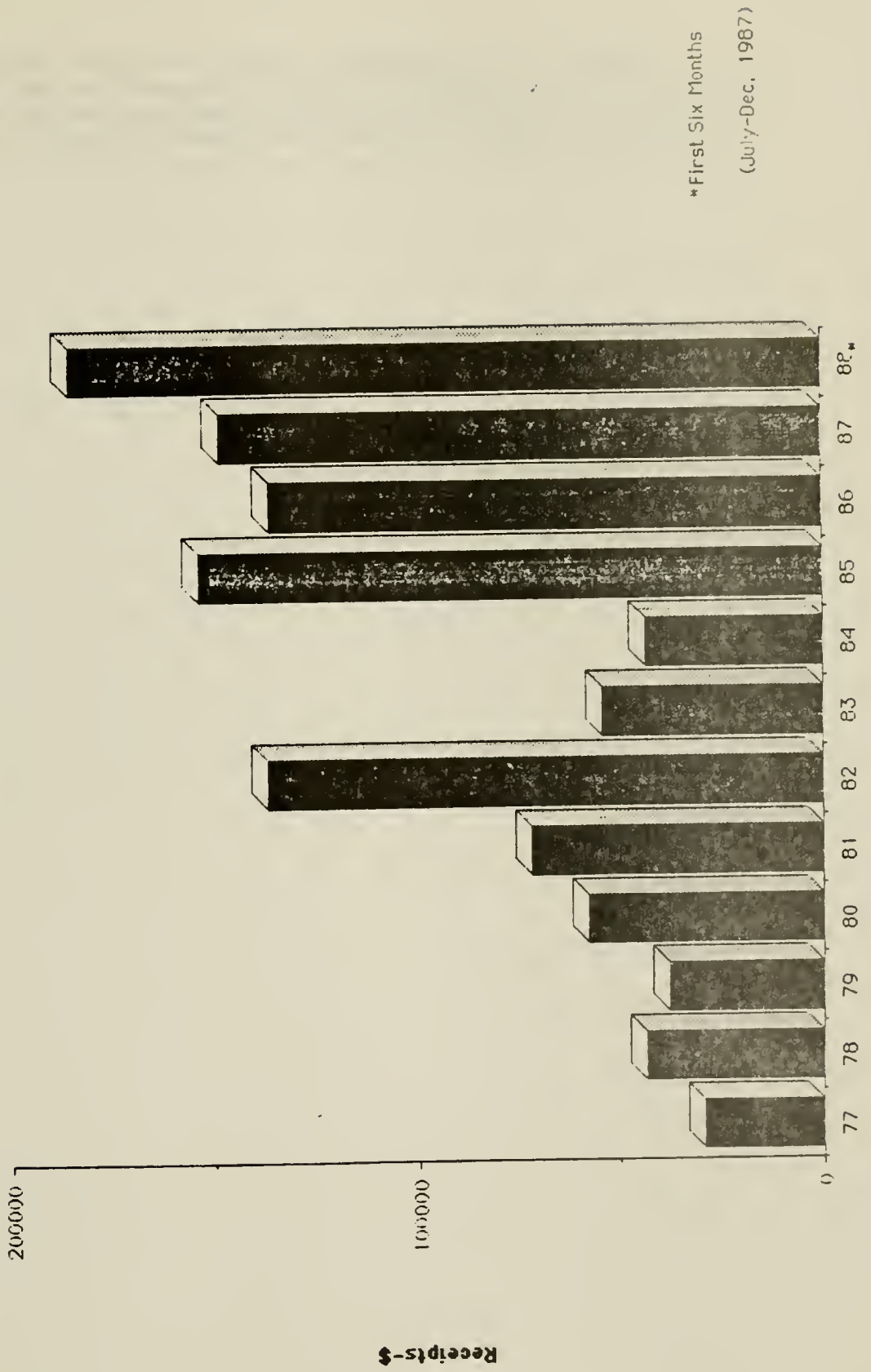


Figure 3
Fines Collected by DEM



8. The NPDES Permit renewal request for Holly Ridge was received by the Division of Environmental Management on April 13, 1987 and was issued on November 16, 1987. The Permit will expire on November 30, 1992. The permit contains effluent limitations of $BOD_{5m} = 30 \text{ mg/l}$, $TSS = 30 \text{ mg/l}$ and fecal coliform of 14/100 ml.

9. Except for Red Tide closures, the last additional closures in Lockwood Folly River were 25 acres in 1985 and 2 acres in 1986. These closures were not point discharge related and were apparently due to increased development in the area.

10. The Division of Environmental Management began a special study in September 1987 to determine the effect of coastal golf courses on surface and ground water quality with a special emphasis on their effect (if any) on adjacent shellfish areas. Our impetus for the study was local concern over the Pembroke Jones (Landfall) development near Wilmington and DEM staff concern over golf courses and their high pesticide and nutrient application rates often near estuarine waters. Also, golf courses are now a ubiquitous feature of residential developments on the coast.

DEM's study design includes an inventory of coastal golf courses over time, meetings with N.C. State Extension and golf course operators regarding pesticide and nutrient use, environmental fate computer modeling, an extensive literature review, and sampling of groundwater and shellfish near existing golf courses. The study is projected to be completed by late summer 1988. Collected scientific literature is available from the Water Quality Section in DEM. DEM has also contacted EPA in Boston, who in cooperation with the Cape Cod Planning and Economic Development Council, conducted an intensive study of groundwater impacts of golf courses near Cape Cod. They found little evidence of groundwater contamination by pesticides but did find elevated nitrate levels from fertilizer. Results may be comparable since water table depths in the Cape Cod study are similar to those at the Landfall Development near Wilmington, North Carolina (water table approximately 6 feet). Results of the Cape Cod study are available from the Water Quality Section, DEM, or by contacting Robert L. Hall in EPA (703-557-7495) or Susan Nickerson with the Cape Cod Planning and Economic Development Council (617-362-2511 - ext. 470).

11. DEM has not performed a study specifically designed to evaluate cumulative impacts of pollution on water quality. The only pertinent study we are aware of is:

Maiolo, J. and P. Tschetter. 1984. Social and economic impacts of coastal zone development on the hard clam and oyster fisheries in North Carolina. Final Report to UNC Seagrant College Program, Department of Sociology, Anthropology and Economics, East Carolina University.

The results of this study suggest a correlation between the population increase in nine coastal counties and the acres of estuarine waters closed to shellfishing from 1950 to 1980.

While DEM has not performed specific studies, we clearly consider cumulative impacts in issuing permits for point source wastewater discharges (see also answer to question 5). With respect to nonpoint source pollution, the coastal stormwater regulation requirements were developed such that they account for the cumulative impacts from all new development. In other words, the pollution being discharged as wastewater in pipes and that carried in stormwater runoff from new development is accounted for in a cumulative manner. However, the more intangible, secondary impacts caused from the increase in population and man's activities (such as increased boat traffic, wading, and fishing in sensitive habitat areas or non-regulated activities such as farming and forestry operations) are not accounted for.

ATTACHMENT "I"

STATE OF NORTH CAROLINA
LEGISLATIVE RESEARCH COMMISSION
STATE LEGISLATIVE BUILDING
RALEIGH 27611



April 19, 1988

Secretary Thomas Rhodes
Department of Natural Resources & Community
Development
Archdale Building
Raleigh, N. C. 27611-7687

Dear Secretary Rhodes:

The Coastal Water Quality Legislative Study Committee held a public hearing in Beaufort on March 28, 1988, for citizens in that area to express their concerns about coastal water quality. Several issues brought to the attention of the Committee require responses from the Department of Natural Resources and Community Development. Those items are listed below. The members of the Committee ask that you review the list and request your response to each item. Please forward the responses to me as Committee Counsel at Room 100, Legislative Office Building by April 26 so that copies can be made available to the Committee members and other interested persons at the next meeting. The Committee will meet again April 28-29, 1988, in Edenton. There will be a public hearing on Thursday, April 28 at 7:30 p.m. and a regular meeting of the Committee on Friday, April 29 at 9:00 a.m. Both meetings will be at the Edenton Municipal Building. Some of the items listed below may be discussed at the meeting on Friday morning. The Committee asks that the appropriate members of your staff attend the meeting to answer any additional questions that may arise concerning these matters.

- See Attachment "L" 1. Has a request been made to have the Tar and Pamlico Rivers declared nutrient sensitive? If so, what action has been taken on that request?
- See Attachment "M" 2. Around 1978 a study was done to determine what impact, if any, farm operations have on water quality. Please furnish copies of the study to the Committee and indicate how the study relates to the operation of open grounds farm in Carteret County. (The person speaking was unsure of the date the study may have been done earlier.)

For graphs see Attachment "B"

3. Please provide a graph that shows the decline in the State's fishing poundage and an explanation of the graph. Also, please indicate what the possible causes of the decline are.

See Attachments "N" and "O"

4. One concern expressed to the Committee is that the CAMA major permit application process does not offer adequate publicity, response time, or resource evaluation. This conclusion is based on the process followed in the Broad Reach Project. Eight deficiencies in the process are listed below. Please comment on each item listed indicating the current practice in each instance described as well as your thoughts on each suggestion.

- a. Inadequate publicity for project proposals. The Department of Natural Resources and Community Development only notifies the two adjacent property owners about a major project, and prints a notice. A bulk mailing should go to residents within the appropriate zip code. Advertisers do this routinely at low cost. It is highly desirable to include notices in newspapers for the surrounding cities; this is particularly important in the winter.
- b. Revised proposals. In addition, the Department should notify each person who made comments on a proposal that a revised version is under consideration.
- c. Lack of response to questions raised concerning a proposal. A revised proposal should address each point raised in the responses to the proposal, and specific methods of dealing with the problems.
- d. Inadequate response time. In the Broad Reach case, less than a month elapsed from the date the revised proposal was received to the cut-off date for comments. It is unreasonable to expect that this short period will allow people adequate time to hear about and respond to a proposal.
- e. Availability of project information. A person must travel to a specific departmental office during working hours to view the application. There should be a place where the information can be seen on Saturdays, for most people who might respond work during the week. In

addition, there should be a short summary of the project available for mailing or copying.

- f. Inadequate resource evaluation procedures. The methods used to evaluate the shellfish resource are seriously flawed. Our State Universities teach marine science. If a student were to use a one-time survey to disprove the existence of any resource in a term paper, he would get a big fat "F". We need to use sampling techniques for evaluating resources which are scientifically and statistically sound.
- g. Failure to consider historical use and the testimony of people who have caught shellfish in the area. This is important evidence, and little effort is expended to collect it. In fact, such information, when submitted, seems to have been ignored.
- h. No public hearing. When there have been numerous responses to a project, particularly when commercial fishermen are involved, there should be a public hearing in a town in the vicinity of the project. In the hearing, the applicant should explain the project, the Department should address the concerns which have been presented, and the people should have a chance to make written and oral remarks.

5. Please provide the Committee with copies of Dr. George Everett's study of water quality.

See Attachment "P"

6. Will an environmental impact statement be prepared on the proposed sewerage system for Atlantic Beach and will there be additional public hearings concerning this proposal?

Additional information was requested at the Committee's meeting on March 29, 1988. The list of those requests follows. Please ask your staff to prepare these items for presentation to the Committee at its meeting on April 29, 1988. They will be included on the agenda of that meeting.

See Attachment "C"

1. Please compare the water quality of the Haw River down to the Cape Fear with that of the Chowan River.

See Attachment "Q"

2. Please provide an update on the best management practices used by the Department of Transportation

on the new Baum Bridge over Roanoke Sound. Also, please provide information about the impact that DOT practices have on water quality and recommendations to improve this situation.

See Attachment 3. Please provide a map that indicates the shellfishing resources of the State that have been mapped to date. Also, please provide a brief explanation on the progress of that project.

A final item to be included on the meeting agenda for April 29, 1988, is a discussion of tributylene. Please ask the appropriate member of your staff to make a brief presentation to the Committee on tributylene explaining what it is, what the problems with it are, what the State standards are concerning tributylene, and what action other states have taken concerning tributylene.

Thank you for your prompt attention to this matter. I will be glad to answer any questions you have concerning the information requested.

Sincerely yours,

Emily Johnson

Emily P. Johnson
Committee Counsel

cc: Sandra Duke
Katherine Patsevouras

ATTACHMENT "J"

STATE OF NORTH CAROLINA
LEGISLATIVE RESEARCH COMMISSION
STATE LEGISLATIVE BUILDING
RALEIGH 27611



April 19, 1988

Charles R. Fullwood, Executive Director
Wildlife Resources Commission
Archdale Building
Raleigh, N.C. 27611-7687

Dear Mr. Fullwood:

The Coastal Water Quality Legislative Study Committee met in Beaufort on March 28, 1988, to hold a public hearing for citizens in that area to express their concerns about coastal water quality to the Committee. One issue brought to the Committee's attention concerns the protection of primary nursery areas. The Committee was informed that there are a number of areas, particularly along the Tar and Pamlico Rivers, that function as primary nursery areas. These "functioning primary nursery areas" are classified as inland waters and are not within the jurisdiction of the Division of Marine Fisheries. As a result, the "functioning primary nursery areas" lack protection from development which would destroy them. The Committee asks that you review this matter and requests your response concerning this issue. Please send your response to me by April 26, 1988, so that copies may be made available to the members and other interested persons at its next meeting. My address is Room 100, Legislative Office Building. The Coastal Water Quality Legislative Study Committee will meet again April 28-29, 1988, in Edenton.

Thank you for your prompt attention to this matter. If you have questions about the information requested, please let me know and I will be glad to talk with you further.

Sincerely yours,

Emily Johnson
Emily Johnson
Committee Counsel

ATTACHMENT "K"



☒ North Carolina Wildlife Resources Commission ☒

512 N. Salisbury Street, Raleigh, North Carolina 27611, 919-733-3391
Charles R. Fullwood, Executive Director

April 27, 1988

Ms. Emily Johnson
Legislative Research Commission
State Legislative Building
Raleigh, North Carolina 27611

Dear Ms. Johnson:

We are not totally aware of the statutes and rules that govern designation of "Primary Nursery Areas" and "Areas of Concern" by the Marine Fisheries Commission and Coastal Area Management Commission.

We agree that some valuable nursery areas do exist in inland waters and should be given the added protection that designation provides. Perhaps some amendment to existing statutes could be developed that, if enacted would allow the Wildlife Resources Commission to identify important nursery areas in inland waters that could be designated by the Coastal Areas Management Commission in some appropriate fashion to give them more protection.

We would not want to change the designation of inland waters because we would thereby lose jurisdiction over fishing and license requirements in these areas.

Yours truly,

Charles R. Fullwood

CRF/ah

ATTACHMENT "L"

MARCH 28 QUESTIONS

1. DEM does not have on file a request to declare the Tar-Pamlico River as Nutrient Sensitive Waters (NSW). However, the Pamlico-Tar River Foundation has expressed their concern over nutrient loadings to this system and supports studies to determine whether an NSW designation is justified. Based on this and other information, DEM has initiated its own study of this river basin and has recently published a report entitled Surface Water Quality Concerns in the Tar-Pamlico River Basin. The report is currently out of print, but additional copies are on order. The following conclusion with respect to nutrients is contained in the report:

"Several scientific studies have concluded that nitrogen is probably the nutrient that limits phytoplankton growth in the Tar-Pamlico basin, especially in the estuarine area. However, nitrogen is overwhelmingly contributed by nonpoint (primarily agricultural) sources. Therefore, the Tar-Pamlico basin should be considered for designation as Nutrient Sensitive Waters (NSW) by the Environmental Management Commission (EMC). If this reclassification occurs, it should not require nutrient controls from point sources until further work has been done regarding their nutrient contributions and effects. The EMC should consider taking this recommendation to public hearing. Agricultural cost-sharing funds to implement BMPs would be more readily available as a result of this action. They might first emphasize control of sources of nitrogen."

If agricultural cost-share funds could be directed to the basin even without an NSW classification, the need for such a classification would be greatly reduced. The Tar-Pamlico basin is included in the Soil and Water Conservation Commission's next priority for expansion of the cost-share program.

DEM intends to take this issue to the Water Quality Committee of the Environmental Management Commission in the near future.

ATTACHMENT "M"

* 2. Copies of The Water Quality Ramifications in Estuaries of Converting Forest to Intensive Agriculture by Kirby-Smith and Barber are enclosed. The study was concerned with a 45,000 acre tract of land purchased by Open Grounds Farm, Inc., which was converted to productive farmland during the study. Most of the South River watershed is contained in this tract. The major changes in water quality of the upper portion of South River and its tributaries were:

- a) A decrease in the surface water salinity
- b) A 10 to 20 fold increase in turbidity
- c) A 5 to 10 fold increase in nutrients

The report concludes that "the water quality of the South River has been measurably altered as a result of the development of the surrounding watershed into farmland from natural swamp/forest. Whether or not the alteration will significantly affect the biology of the system is still unknown."

The study directly addressed the operation of Open Grounds Farm, Inc., as follows:

"These (water quality) changes observed in the South River have occurred in spite of the modern farming practices of Open Grounds Farm, Inc., which include careful, controlled application of fertilizers, green strips along ditches and other soil conservation practices, and controlled release of water from ditches through flood gates."

* Only one copy was made available to the Committee. Anyone wishing to obtain an additional copy should contact The Water Resources Research Institute at the following address: 124 Riddick Building, NCSU, Raleigh, NC 27650.

ATTACHMENT "N"

MEMORANDUM:

TO: EMILY JOHNSON

FROM: PRESTON P. PATE, JR. *P³*

SUBJECT: RESPONSE TO QUESTIONS PRESENTED TO COASTAL WATER
QUALITY LEGISLATIVE STUDY COMMITTEE

DATE: MAY 13, 1988

The following is a written follow-up to the presentation I made before the Coastal Water Quality Legislative Study Committee on April 29, 1988. My presentation at the meeting consisted of responding to questions which had been raised by citizens at a hearing held by the Committee in Beaufort on March 28, 1988.

- 4(a) This point suggested that NRCD improve its notice procedures by sending bulk mailing to residents within the same zip code as a project being proposed. My response centered on the impracticality of such an approach. The CAMA requires that all applications for CAMA permits be advertised in a paper of general circulation at least seven (7) days prior to a decision on the application. This advertisement must appear in the legal notice section of the paper in order to satisfy the requirements of the law. I made the point to the Committee that most controversial projects receive wide press coverage by local papers which in most cases is adequate to inform citizens of the proposed projects. Bulk mailing, as suggested by the commentor would be very expensive and require additional manpower in each of our four (4) field offices.
- 4(b) This suggestion was to notify each person who had made comments on a proposal that a revised version of the project is under consideration. My response was that we do this now as a matter of routine. We inform all parties commenting on a specific proposal of any significant changes to that proposal and provide them an opportunity to comment on the revised project.
- 4(c) This comment noted a lack of response to questions raised concerning project proposals and suggested that a revised proposal should address each point raised in the responses to the proposal. My explanation was that we work with applicants to keep them informed of concerns and questions raised by both agencies and citizens submitting comments to the Division of Coastal Management. The applicant has the choice of revising his project to respond to the comments or questions which have been submitted, or allowing the application to be reviewed as it was submitted. This does not mean that legitimate comments are not taken into consideration in the final decision on a project proposal.

- 4(d) This statement suggested that the response time to notices on specific projects is too short. We feel that commenting periods are adequate to allow the public to submit comments on any project. The comment was directed specifically at the Broad Reach proposal, and stated that less than a month elapsed from the date of the revised proposal received to the cutoff date for comments. I pointed out that this particular project was advertised in the paper on three (3) separate occasions over a period of approximately eight (8) months. I feel that this should be ample time for interested parties to comment to our office.
- 4(e) This comment addressed availability of project information and suggested that the information be made available at some location on Saturdays for those people who work during the weekday. It also suggested that a short summary of the project be available for mailing or copying. I responded that we can, and often do, mail the field reports prepared for each project to anyone requesting information about specific applications. Such reports describe the project setting, the project proposal, and project any significant environmental impacts which can occur from the proposal. I pointed out to the Committee that our office, like many other State offices, is not open on Saturday, and could not be without additional staffing.
- 4(h) This comment suggested that the Department conduct a public hearing on projects to allow people a chance to make written and oral remarks. My response was that our office does not hold public hearings on individual applications. We have the option of holding a public meeting on each application if we feel that it would provide us with additional information to more adequately evaluate the project and make the final decision. We feel that the largest percentage of the permit applications we process are non-controversial and do not warrant a public meeting. Our experience is that the most controversial project are well enough publicized and discussed to give us the information we need to make our decision.

I hope that this brief summary of my comments at the meeting will satisfy your needs. If additional information is necessary, please do not hesitate to contact me at any time.

PPP/dh

cc: David W. Owens
Sandra Duke



State of North Carolina
Department of Natural Resources and Community Development
Division of Marine Fisheries
P.O. Box 769 • Morehead City, North Carolina 28557-0769

James G. Martin, Governor
S. Thomas Rhodes, Secretary

April 28, 1988

William T. Hogarth, Director
(919) 726-7021

Ms. Emily P. Johnson
Legislative Research Commission
State Legislative Building
Raleigh, NC 27611

Dear Ms. Johnson:

The following information is provided in response to your letter of April 19 to NRCO Secretary Thomas Rhodes concerning questions raised about the Broad Reach development by the Legislative Study Committee on Coastal Water Quality :

4.f. Between May 11, 1987 and March 28, 1988 the Division of Marine Fisheries conducted seven surveys in public waters of Bogue Sound, Carteret County in response to the proposed Broad Reach development. These site-specific surveys were conducted in response to various proposals submitted for the development of the marina and associated channels. The location of the samples were dictated to a large degree by proposed channel alignments, proposed closures to be imposed by Division of Health Services and the resource to be impacted by such variables. Copies of memoranda documenting the survey methods and results are attached. The survey dates and results are summarized below:

May 11, 1987 - Initial sampling was begun. The first 23 of 50 one meter square samples were taken with hydraulic patent tongs in the area.

May 19, 1987 - Transects 75 ft. long by 3 ft. wide covering 20.9 square meter were hand raked near shore in the proposed channel "B" alignment. A total of 56 clams was taken. This catch represents a density of 2.67 clams per square meter or 27 bushels per acre.

July 6, 1987 - Samples 24-41 were taken.

July 7, 1987 - Samples 42-50 were taken. A total of 94 hard clams was captured in the 50 sample survey. This represents a density of 1.88 clams per square meter or 19.02 bushels per acre.

December 14, 1987 - "Optional Channel A" was hand raked and only one clam was found.

March 15, 1988 - Ten patent tong samples were taken in the Channel A alignment. Eight clams were taken in the tongs and 2 clams were taken by raking near shore. Clam density at this site was determined to be eight bushels per acre at the time of the survey.

March 28, 1988 - Fifteen patent tong samples were taken from two areas. Five were taken in the proposed Channel 8 alignment and 10 from Channel A to the western property boundary. Twenty clams were taken in this series of samples.

NRCO officials have recently instructed Marine Fisheries staff to conduct a statistically valid survey of the 76 acre area that lies between the project and the intracoastal waterway. A stratified random sampling design has been selected. A total of 75 patent tong samples have been taken to-date. The stratified random survey will require that an additional 103 samples be taken. This survey will determine shellfish abundance within the four bottom types (strata) found at the site taking into account the size of each stratum and the variability encountered in each. Information from this survey will make it possible to determine whether or not environmentally acceptable channels exist within the proposed project.

- 4.g. In memoranda to John Parker of the Division of Coastal Management, the permitting agency for coastal development, dated July 8, December 15, 1987 and March 16, and March 30, 1988, the Division of Marine Fisheries commented that the proposed project area was heavily utilized by commercial and recreational shellfishermen. The July 8, 1987 memo states that sixteen clambers were working the area on May 11 and four were clamming on July 7, 1987. We have no information on historical harvest and effort in this or any other specific area of Bogue Sound and must rely on personal observations of staff and rely on the public to volunteer such knowledge.

Please feel free to contact me if additional information is needed.

Sincerely,

W. T. Hogarth

William T. Hogarth, Ph.D.

CC: Secretary Rhodes
Sandra Duke
Katherine Patseavouras

JULY 8, 1987

MEMORANDUM

TO: JOHN PARKER

FROM: ED MCCOY

SUBJECT: BROAD REACH MARINA - SAUNDERS CREEK

The Division of Marine Fisheries, (DMF), recommends denial of the Broad Reach Marina Project at Saunders Creek because of the loss of the availability of commercially significant quantities of hard clams in the vicinity of the project should it be approved. Robert Benton of the Shellfish Sanitation Section of the N.C. Division of Health Services has stated that, in accordance with their present marina policy, a 2,640 foot arc will be closed around Channel A and an 1800 foot arc will be closed around Channel B of the proposed facility (Attachment 1). The loss of presently available, productive SA shellfish waters caused by this closure is unacceptable.

DMF staff have conducted patent tong and rake surveys to determine the concentrations of shellfish found in the immediate vicinity of the proposed project. Hydraulic patent tong samples were taken on May 11 and July 6 and 7. A total of 50 "grabs" with the tongs yielded 94 clams (Attachment 2 and 3). This translates into a density of approximately 1.88 clams per square meter which exceeds the ten bushel per acre definition of a "natural shellfish bed" found in N.C. Marine Fisheries Regulation 15 NCAC 3C/.0302(a)(2). A series of transects raked in the approximate alignment of Channel B yielded 56 hard clams. Very few live oysters were encountered in the surveys.

These concentrations of clams were found between IWW Marker "32" and the vicinity of access Channel B directly adjacent to the proposed marina. This area would be subject to closure from coliform counts regardless of any marina policy. The area from the shoreline out approximately 40-60 feet between the access channels and on a shoal just west of where the IWW meets the existing Holiday Village channel are the most productive areas in terms of hard clams and bay scallops. The bottom is characterized by firm muddy sand covered with either eel grass or shell fragments. This bottom type is ideal habitat for clams and the complete range of size categories with good shapes and white "lips" (ventral margins) were represented in the samples. This indicates good recruitment and growth of a viable resident population.

During the clam sampling on May 11, sixteen hand clambers were observed at low tide working within the arc which would be closed to shellfishing should this marina be approved. On July 7, again at ebb tide four people were clamming the area between the two proposed channels. The area is heavily utilized by commercial and recreational hand harvesters of shellfish and this use would be denied them if the marina were to be constructed.

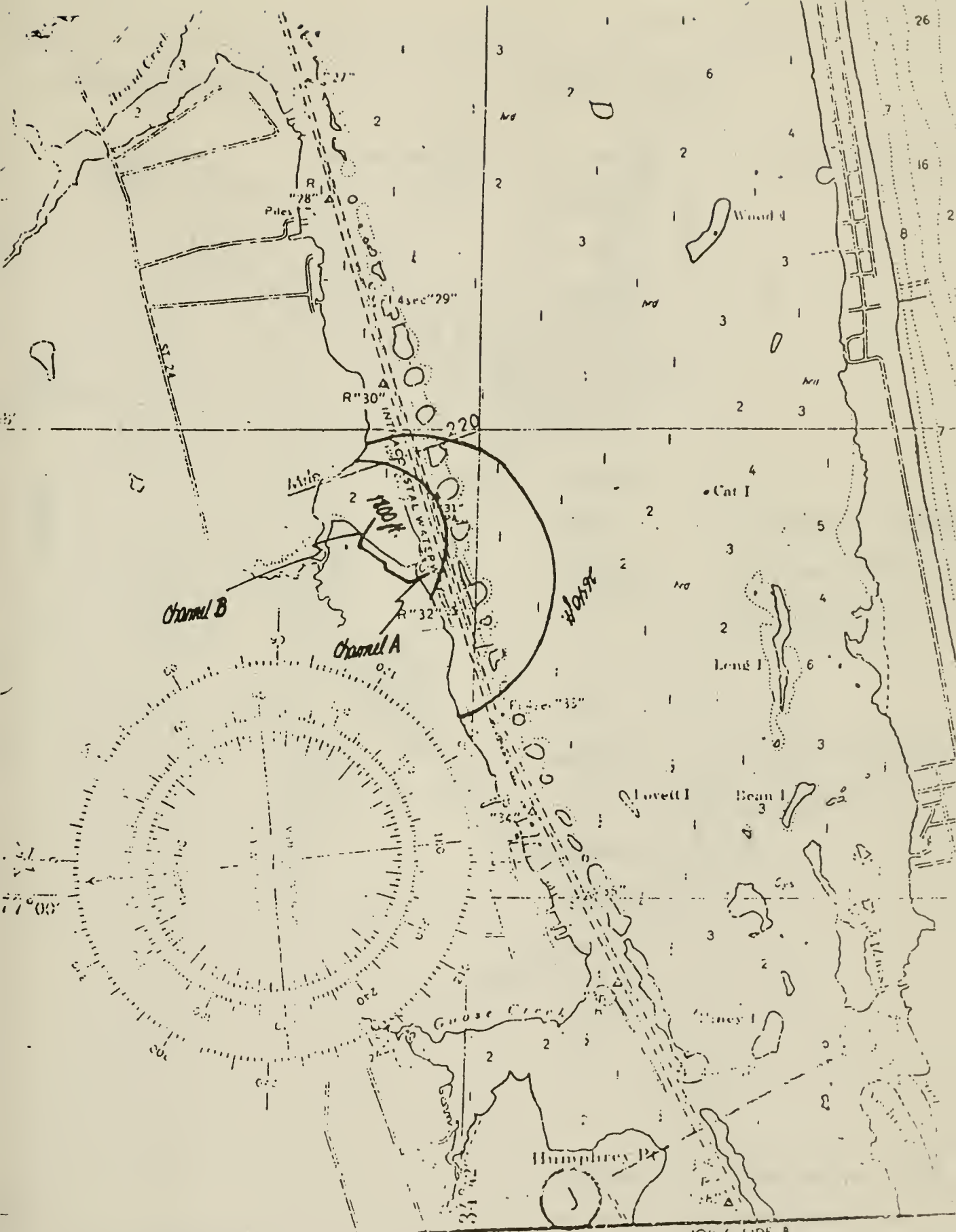
Within the half-mile arc Shellfish Sanitation will close are sand flats, mud bottoms, spoil islands, seagrass-covered shoals and deeper water (IWW) habitat. The importance of grass beds has been well documented as nursery areas and sanctuaries for juvenile fish, shrimp, clams and scallops. The sand flats surrounding the spoil islands are ideal habitat for the hard clam and are worked regularly by commercial and recreational clambers. DMF is very concerned about the degradation of water quality and the closure of this large amount of area that will follow the opening of such a marina. Potential closing of additional bottom may be necessary due to stormwater runoff, faulty marina heads, fuel, motor oil and bottom paint contamination and cannot be allowed. It is hoped other agencies with the expertise will address those issues.

MEMORANDUM
JOHN PARKER
JULY 8, 1987
PAGE TWO

The Division of Marine Fisheries strongly recommends denial of the Broad Reach Marina project based on its findings that (1) a significant shellfish resource exists in the area, (2) that resource is heavily utilized by many commercial and recreational fishermen and (3) this shellfish resource will be unavailable due to contamination if the marina is built and placed into operation.

EM/csw

Attachments

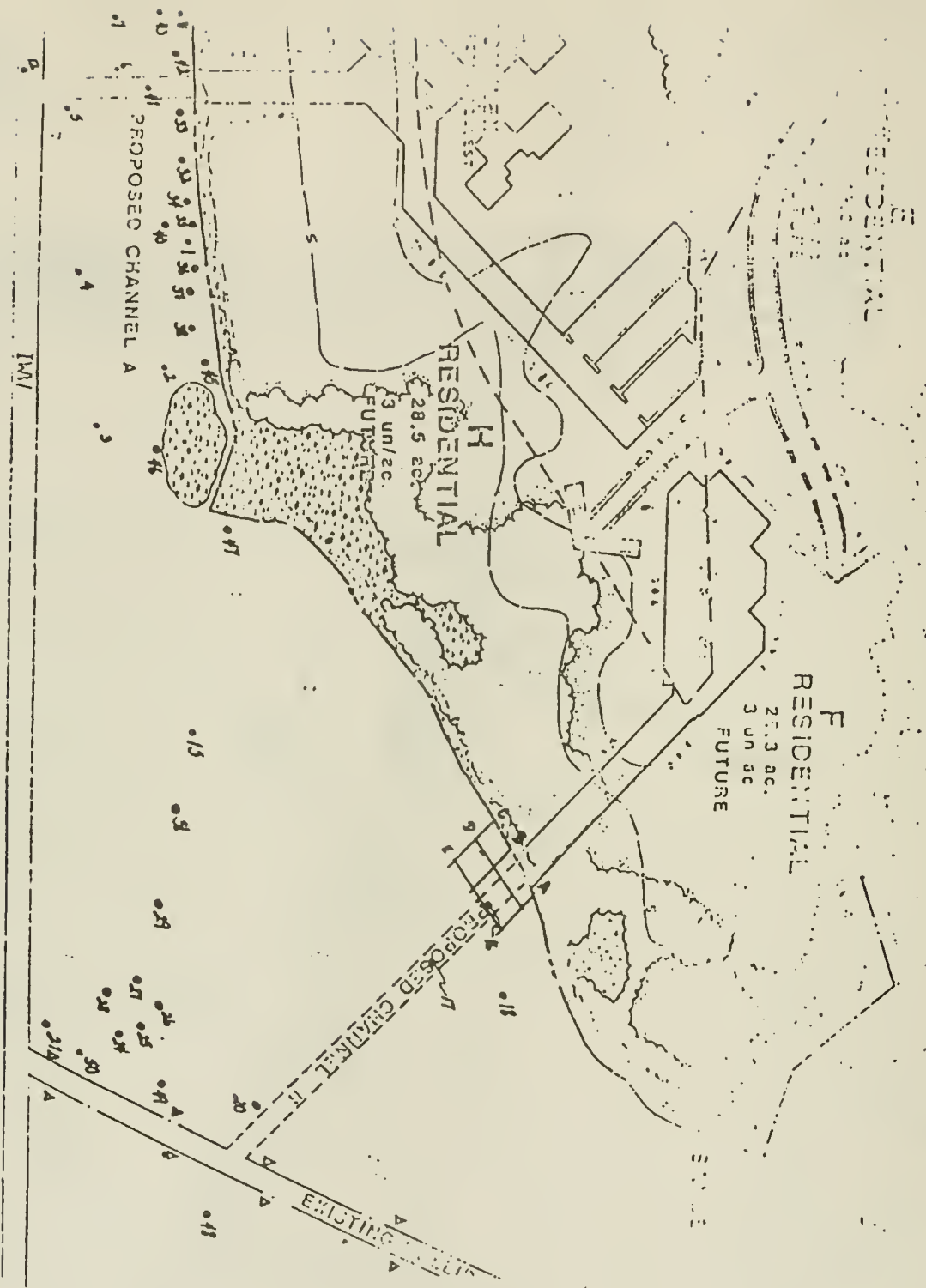


Attachment 11

0-5

41

Attachment 2



Patent dredge survey results: May 11
July 6 & 7

Categories of Clams
 fm = fragment
 chst = chastore
 chr = chaster

5-11-87
mid-late tide
side

Sample Number	Number and Size of Clams	Bottom type	Location (if not on chart)
1	0	muddy sand	
2	0	sand	
3	0	muddy sand	
4	0	"	
5	0	"	
6	0	mud	
7	0	sandy mud	
8	0	shell	due north of marker 35 - halfway to sh
9	1 chst	shelly mud	90 yards west of Station # 8
10	0	"	100 yards west of station # 8
11	0	"	
12	0	mud	
13	0	sandy mud	across IHW from Holiday Village channel
14	0	sand	due south of station # 14 20 yards
15	3 fm	shelly mud	
16	0	sandy mud	
17	0	mud	
18	0	muddy sand	
19	0	mud	
20	0	"	
21	0	"	
22	0	muddy sand	'cut' through spoil islands - shallow
23	0	mud and shell	off of cut through (north) - deep
24	2 fm	sandy mud with shell	between Hd. Village channel markers 1 and 3
25	2 fm	"	
26	11		

5, 1977
head tide

Sample Number	Number and Sizes of Clams	Bottom Type	Location (if not on chart)
27	4 sd, 5 ln	sandy mud with shell	
28	2 sd, 3 ln	muddy with shell	
29	1 ln	sandy mud with shell	
30	1 chst	muddy sand	
31	2 ln, 2 tn, 1 chst	mud with shell	
32	2 sd, 2 ln, 3 tn	sandy mud with shell	
33	1 sd, 2 tn	"	
34	0	muddy sand	
35	2 sd, 2 ln, 1 tn	eel grass / muddy sand	
36	1 ln	eel grass / sandy mud	
37	0	sandy mud	
38	1 tn	"	
39	1 ln, 3 tn, 2 chst	muddy sand with shell	
40	2 tn	"	
41	2 tn	"	
42	1 sd, 2 ln, 1 chr	muddy sand with ^{eel} grass	
43	1 sd, 1 ln, 1 tn	"	
44	2 sd, 4 ln	muddy sand with shell	opposite marker "32" just offshore
45	4 sd, 3 ln	eel grass - muddy sand	
46	2 ln	muddy sand	
47	1 sd, 1 ln	"	
48	0	mud	
49	2 ln	shelly mud	
50	1 tn, 4 chst	"	

4047 sq. m. = acre

94 clams in 50 long samples

1.88 / sq. m.

$$7,608.4 \text{ } ^2 \text{ / acre} \div 400 \text{ shells/ha} = 19.02 \text{ bu/acre}$$

Size breakdown:

seed	24
littlenecks	38
top necks	22
oligonecks	9
choker	1

December 15, 1987

MEMORANDUM

TO: John Parker
FROM: David Taylor *DAT*
SUBJECT: BROAD REACH MARINA

On December 14, 1987, Division of Marine Fisheries (DMF) staff accompanied by the Division of Coastal Management project field consultant conducted a rake survey of the proposed optional Channel A alignment and several hundred feet in the vicinity of the site. The bottom is characterized by shell debris near the shoreline and firm muddy sand in deeper water. Although the bottom appears marginally suitable for shellfish production and a number of dead clams were found, only one live clam was found in the vicinity of the proposed channel during approximately 1 1/2 hours of raking. No live oysters or submerged grass beds were found in the area. If the project is approved, it is mandatory that the Optional Channel A be implemented instead of Channel A.

In accordance with provisions of the Division of Health Services Shellfish Sanitation Marina Policy, the construction of two closed system marinas, each with 125 boat slips, will require closure of 100 feet of SA waters outside each entrance channel. It is recommended that the width of both access channels be as narrow as possible while still permitting sufficient flushing in the marina basins. If the project is permitted, excavation of the marina basins should be conducted with an earthen plug in place and with appropriate upland spoil containment.

The DMF remains concerned about the degradation of water quality and the closure of SA waters that will result from this project. Significant quantities of hard clams are found in proximity to the project site and the area is heavily utilized by commercial and recreational hand harvesters of shellfish. Potential closing of additional bottom may be necessary due to stormwater runoff, faulty marina heads, fuel, motor oil and bottom paint contamination.

Despite these concerns, the second proposal is a vast improvement over the first from a fisheries impact viewpoint. Impacts on shellfishing waters that will have to be closed have been minimized and the sites chosen for the access channels are acceptable in that the loss of resource resulting from the dredging does not appear significant at Optional Channel A and is marginal (56 clams) at Channel B. It is hoped that other responsible agencies continue to raise concerns over destruction of wetlands, degradation, stormwater runoff, etc. by from a fisheries standpoint, strong objections can no longer be made.

Mr. Zucchini has asked for comments on the offer to forego the possible construction of up to 100 private piers in exchange for accommodating slips in an upland basin. From a fisheries resource standpoint, the individual piers would be preferable. The building of piers does not give the pier owner control of the bottom, which remains public. Harvesters who regularly clam this stretch of shoreline would be free to go under and around the piers to pick shellfish. Pierers would not be permitted to restrict navigation and no dredging would be permitted due to the resource found in the area. Few boats of a size capable of carrying heads and causing pollution would be able to dock there. Therefore, from a resource standpoint, piers would be favored over basins in this case.

T/sh



State of North Carolina
Department of Natural Resources and Community Development

Division of Marine Fisheries
P.O. Box 769 • Morehead City, North Carolina 28557-0769

James C. Martin, Governor
S. Thomas Rhodes, Secretary

William T. Hogarth, Director
(919) 726-7021

MEMORANDUM

TO: DAVE OWENS

FROM: WILLIAM T. HOGARTH *WTH*

DATE: MARCH 16, 1988

SUBJECT: BROAD REACH MARINA CAMA PERMIT APPLICATION

At the request of John Parker of the Division of Coastal Management, the Division of Marine Fisheries (DMF) reviewed the latest Broad Reach plats against our previous comments as well as conducting another patent tong survey in the alignment of Channel A. Following are the Division's findings from the numerous investigations at the project site:

- (1) A significant shellfish resource exists within and adjacent to the proposed channel alignments;
- (2) The resource is utilized by both commercial and recreational shellfishermen;
- (3) This hard clam resource will be lost because of the dredging operations in the channels. There is also concern about sea grass beds in the area and degradation of water quality in this highly productive area.

DMF Staff have conducted three patent tong and rake surveys, the results of which show significant concentrations of shellfish in the immediate vicinity of the proposed project. Hydraulic patent tong samples were taken on May 11 and July 6 and 7, 1987. A total of 50 "grabs" with the tongs in May and July yielded 94 clams which translates into a density of 1.88 clams per square meter or 19.02 bushels per acre. The transects raked were 75' long and 3' wide covering 20.9 square meters. This translates into a density of 2.67 clams per square meter which is 27 bushels per acre.

A rake survey on December 14, 1987, yielded only one clam in the vicinity of Optional Channel A which has become Channel A.

Ten tong samples were taken March 15, 1988, within the proposed Channel A and within a 100' radius of the entrance to Basin A. Rakes samples were also taken. Eight clams were collected (littlenecks and cherrystones) in the ten patent tong grabs. This is equal to 0.8 clams per square meter or 8 bushels per acre. Raking nearshore in the same location by DMF staff produced one littleneck clam and one cherrystone clam.

These additional samples were taken in light of the fact that Dr. Charles Peterson and Frank Wilson of UNC Institute of Marine Sciences used a suction dredge to sample the Channel A alignment and found significant numbers of clams (mostly juveniles) that our raking in December did not and would not have captured. The suction dredge is a highly efficient piece of sampling gear and takes literally everything within the 1/4 square meter samples. Three times more juveniles were captured in the suction dredge samples than adults. These juveniles are too small to be captured with rake sampling and for that reason went unnoticed in December. The patchy distribution of clams and the much greater efficiency of the suction dredge account for the difference in Dr. Peterson's findings and ours. He found 45.8 bushels per acre in the Channel A alignment.

The area of Saunders Creek and the north shore of Bogue Sound in general is utilized by many commercial and recreational shellfishermen as evidenced by observations from DMF biological and law enforcement personnel. During the May 11, 1987 visit to the site, sixteen people were observed harvesting shellfish in the area.

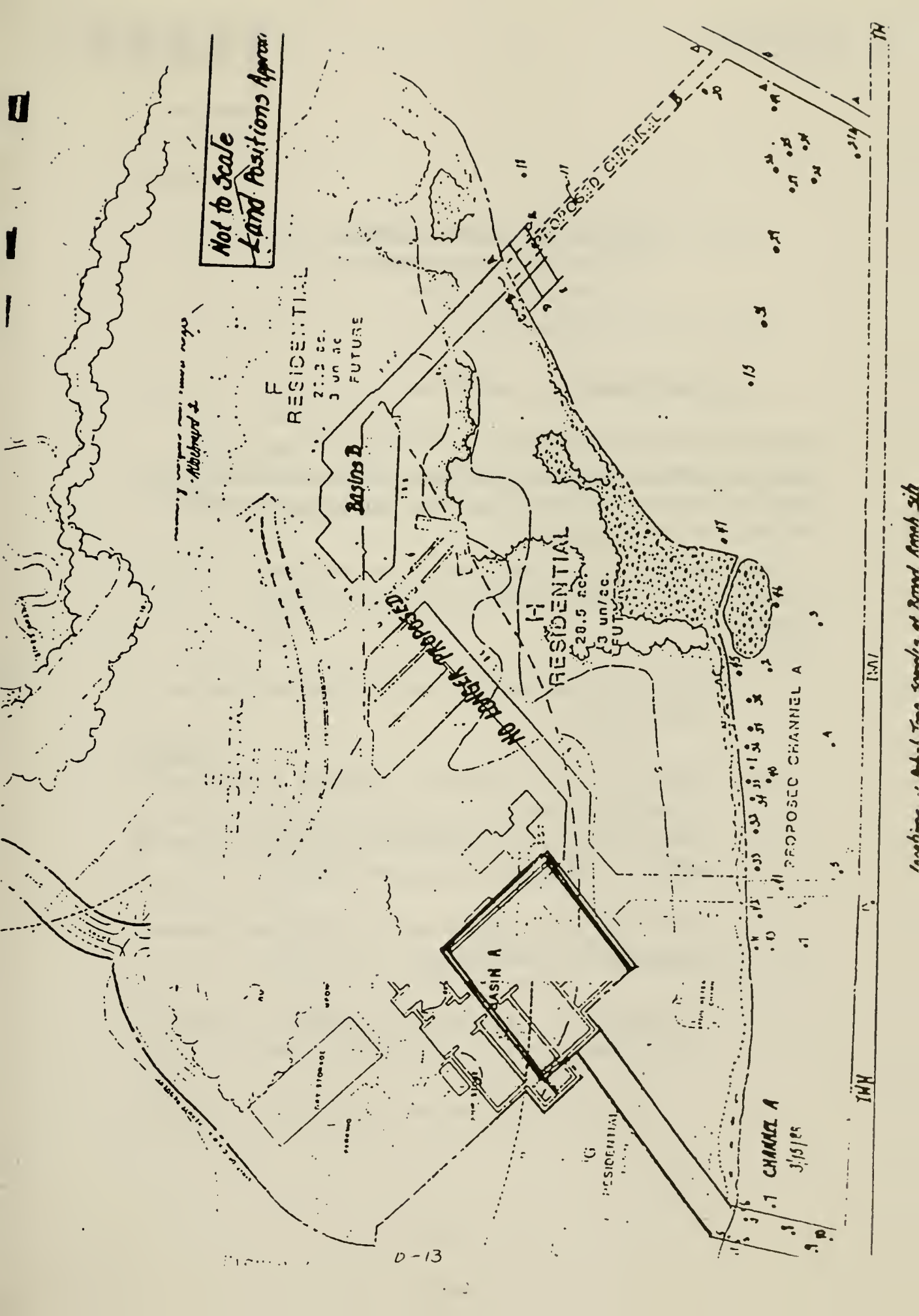
Another concern of DMF is the detrimental effect that the turbidity caused by the initial dredging operations will have on the sea grass beds in Saunders Creek. It is felt that maintenance dredging will have to be conducted on a regular basis because of the frequent boat traffic and associated wakes from the Intracoastal Waterway and that any recruitment and resettlement of shellfish in the channels would be hampered by this operation.

Criteria that the DMF uses to evaluate shellfish habitat and leases has been completed on this project site and is attached for your information. The evaluation shows that the Saunders Creek area has excellent water quality (SA and nonpolluted), bottom characteristics that make it highly suitable for shellfish production, a significant existing use of those shellfish resources and excellent potential to continue to be productive.

These are the findings of the Division. Thank you for the opportunity to comment.

CC: Mary Joan Pugh
Fentress Munden
David Taylor

Not to Scale
Land Positions Approx.



Abraham

F RESIDENTIAL
20.2 ac.
3 UN AC
FUTURE

Basins B

NO TANKER PROPOSED

H RESIDENTIAL
20.5 ac.
3 UN/AC
FUTURE

Basin A

G RESIDENTIAL

CHANNEL A
3/15/85

PROPOSED CHANNEL A

D-13

Location: ... of ...

DIVISION OF MARINE FISHERIES
CRITERIA FOR THE EVALUATION OF
SHELLFISH HABITAT

Broad Reach Marina Project

78/100 score

1. SHELLFISH HABITAT SUITABILITY - the relative amounts of bottom sediments, shell or submerged aquatic vegetation that provides habitat for shellfish (USE HIGHEST OF THE THREE RATINGS FOR THE EVALUATION).

OYSTERS

- _____ 0 - Soft mud, coarse sand; salinity below 5 ppt or above 25 ppt
- _____ 2 - Firm mud, silt, fine sand; salinity 6 to 10 ppt
- _____ 5 - Sandy mud to silty sand bottom; salinity 11 to 16 ppt
- ✓ 8 - Scattered shell, sandy mud to silty sand bottom; salinity 13 to 20 ppt
- _____ 10 - Abundant shell, sand-mud-clay bottom; salinity 15 to 24 ppt

CLAMS

- _____ 0 - Soft mud, shallow peat layer, coarse sand, or salinity below 12 ppt
- _____ 2 - Soft mud, coarse sand; salinity 12 to 15 ppt
- _____ 5 - Sandy mud, coarse sand, scattered shell; salinity 12 to 18 ppt
- _____ 8 - All bottom types except soft mud and coarse sand; salinity above 18 ppt
- ✓ _____ 10 - Seagrass beds, shell hash and all bottom types except soft mud and coarse sand; salinity above 18 ppt

SCALLOPS

- _____ 0 - All other bottom types and salinities
- _____ 2 - Scattered seagrass and/or shell; salinity 20 to 22 ppt
- _____ 5 - Significant seagrass and/or shell; salinity 20 to 22 ppt
- ✓ _____ 8 - Shell and salinity above 22 ppt
- _____ 10 - Seagrass and salinity above 22 ppt

2. SHELLFISH DENSITY - the volume of oysters, hard clams, bay scallops or other economically important species, per acre determined by random quantitative samples.

- _____ 0 - None
- _____ 1 - One to five bushels
- _____ 4 - six to ten bushels
- / 6 - eleven to twenty bushels
- _____ 8 - twenty-one to forty bushels
- _____ 10 - above forty-one bushels

3. AQUATIC VEGETATION - the extent of coverage by submerged aquatic vegetation as defined by NC Marine Fisheries Regulation.

- _____ 0 - No submerged aquatic vegetation
- _____ 2 - Abundant macroalgae but no seagrass
- _____ 5 - Scattered seagrass (10 to 25% coverage)
- / 8 - Significant seagrass (26 to 40% coverage)
- _____ 10 - Extensive Seagrass (coverage greater than 40%)
(including root mats during periods of defoliation)

4. WATER QUALITY - the current status of the water of the area under evaluation relative to the harvest of shellfish for human consumption. The ranking of water quality shall be characterized as:

_____ 0 - Prohibited Area

_____ 2 - Areas of heavily developed shoreline, Restricted Area

_____ 5 - Open Areas, Temporary Opening Areas, Sparsely developed shoreline

_____ 8 - Open Areas, No nearby development or apparent potential pollution sources

✓_____ 10 - Open Areas, Undeveloped Areas

5. SHELLFISH PRODUCTION - an evaluation of shellfish production based on historical documents, fisheries statistics, landings, surveys and reports from knowledgeable fishermen and other individuals having direct knowledge of the area under evaluation.

_____ 0 - None

_____ 1 - Marginal

_____ 5 - Moderate

✓_____ 8 - Significant

_____ 10 - High

6. EXISTING USE - the degree to which the area under evaluation is used for commercial and recreational fishing and by various types of gear, for recreational use, boating and navigation.

_____ 0 - None

_____ 1 - Marginal

_____ 5 - Moderate

 ✓ 8 - Significant

_____ 10 - High

7. DMF MANAGEMENT ACTIVITIES - the Division's current and planned utilization of the area under evaluation relative to resource management and public and private shellfish culture.

_____ 0 - Low potential; No shellfish management activity planned

_____ 2 - Areas available for shellfish leases

_____ 5 - Shellfish rehabilitation (planting) area

_____ 8 - Seasonally opened harvest areas, shellfish management area, seed oyster management area, shellfish leases

 ✓ 10 - Open harvest areas, shellfish relocation (relay) area for grow out, naturally productive shellfish beds

8. ANTICIPATED IMPACTS - impact that proposed action will have on resources and existing use. An overall evaluation of the area based on past experience, unique characteristics, flushing rate or other relevant factors not covered by this evaluation.

- _____ 0 - Significant loss of habitat; permanent closures of shellfish waters
- 2 - Measurable habitat loss, seasonally closed shellfish areas
- _____ 5 - Some habitat loss, improved public services
- _____ 8 - Minimum impact or habitat loss
- _____ 10 - No foreseeable or low impact

Rationale for Anticipated Impact evaluation:

(This section must be filled out to complete the evaluation)

Significant numbers of clams present now in the proposed channel alignments will be lost due to the dredging of the channels. A permanent 100' closure zone around the basin entrance to Canal A established by the Division of Health Services will prevent harvest of clams in that zone.



State of North Carolina
Department of Natural Resources and Community Development

Division of Marine Fisheries

P.O. Box 769 • Morehead City, North Carolina 28557-770769

James G. Martin, Governor
S. Thomas Rhodes, Secretary

William T. Hogarth, Director
(919) 726-7021

MEMORANDUM

TO: DAVE OWENS
FROM: WILLIAM T. HOGARTH *WTH*
DATE: MARCH 30, 1988
SUBJECT: BROAD REACH

In response to your memo of 23 March 1988, an additional patent tong survey was conducted at the Broad Reach Project site on March 28, 1988.

Bushel per acre densities produced from various sampling means in Channel A and vicinity have been 10 (latest in channel alignment), 8, and 45.8. Channel B alignment has been found to contain 4, 27, and 6.75 bu/acre with the majority of clams concentrated near shore in muddy sand substrate. Overall, the project area contains a density of 19.02 bu/acre. Based on the data, the DMF believes significant resource exists that is utilized by fishermen and will be lost to dredging operations.

Channel A and the adjacent bottom to the west contains ideal habitat for clams (shelly substrate near shore) and an eel grass bed near the western property boundary. No acceptable alternate channel sites for Channel A have been located that will not disturb either significant clam resource or marsh vegetation on shore.

Channel B contains a resource that is limited by suitable habitat to the upper third or near shore portion of the proposed alignment. The outer two-thirds of the proposed channel has a muddy substrate and does not appear to support clams. Therefore, Channel B has the higher potential for providing access to the proposed marina based on the shellfish resource present in the channel.

DLT/jtg

CC: Mary Joan Pugh
David Taylor

MEMORANDUM

TO: MARY JOAN PUGH
FROM: WILLIAM T. HOGARTH *WTH*
DATE: APRIL 15, 1988
SUBJECT: BROAD REACH

The Division of Marine Fisheries (DMF) has spent considerably more time and effort on assessing the shellfish resource at the proposed Broad Reach than on any other proposed application. A total of 75 patent tong grabs combined with raking have been taken since last summer. Each time samples are taken, high variability is encountered due to the patchy, natural distribution of clams, the differences in sampling gear (tongs, rakes or suction dredge), and the fact that the area is open to harvest and clams are being harvested.

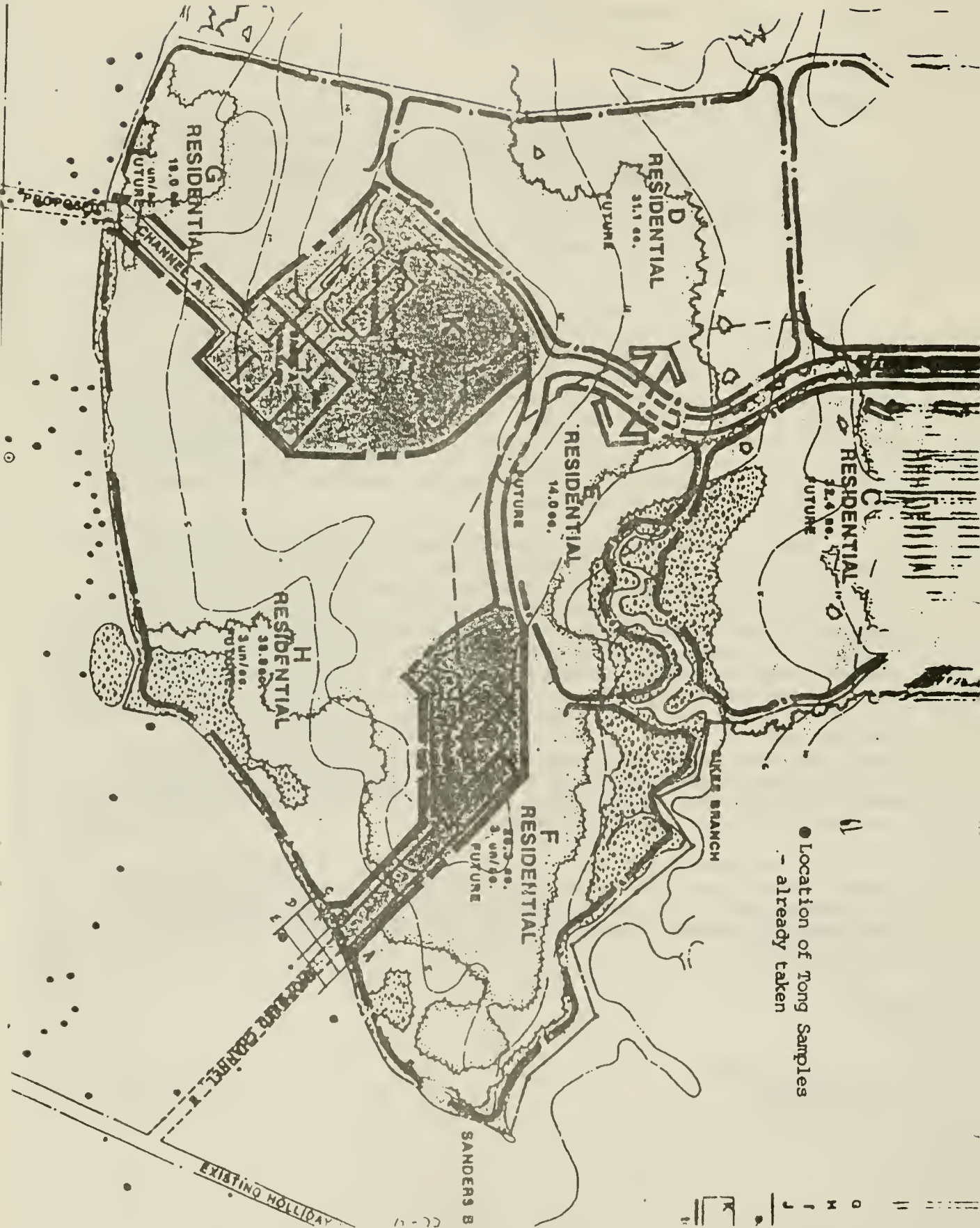
All of the previous sampling, however, has demonstrated that a significant hard clam resource exists in the project area. Any channel site along the IWW in the vicinity of A is unacceptable because of productive shelly and muddy sand substrate, fringe marsh and/or submerged grass beds. Potential exists, however, for an alternate channel alignment in the vicinity of Channel B since only the nearshore third of the proposed channel lies in muddy sand bottom that will support clams. These findings and conclusions are found in memoranda dated July 8, December 15, 1987 and March 16, March 30, 1988. DMF has gone beyond normal investigative procedures on this important project and our conclusions are clear.

If another survey is necessary, DMF proposes to complete a stratified random sampling at the site with patent tongs. Data from the 75 tong samples has been used as a pilot study to determine how many samples are needed to determine the abundance of clams within acceptable confidence limits. The project area was divided into four different strata according to bottom type: shelly bottom, muddy sand, sandy mud and grassbeds. The number of samples needed in each stratum was weighted according to the size of each stratum. The number of samples that will need to be taken in the shelly bottom will be 35, the muddy sand strata will require 23 samples, 21 samples will be required from the sandy mud strata and 53 will be taken in the grassbed areas. A density per square meter will be obtained from the sampling and the total number of clams in the Broad Reach area will be determined. Efforts will be made to identify areas with the least amount of clams so that they may be considered as possible alternate channel sites.

Additional samples will be taken in a nearby area of Bogue Sound to compare density there with density at Broad Reach. The survey and comparison tong samples can begin in approximately two weeks. The sampling boat is not large enough to accommodate spectators, but they are welcome to watch from their own boats.

WTH/csw

cc: Fentress Munden
Dave Owens
David Taylor



ATTACHMENT "P"

6. An Environmental Impact Statement (EIS) will be prepared on the proposed sewage system for Atlantic Beach. There will be at least two public meetings or hearings prior to a decision by DEM on permit issuance. The first is being held on April 28 at 7:00 P.M. at Duke Marine Lab and is a Scoping Meeting to have the public provide input on what should be evaluated in the EIS. Then there will be a meeting or hearing on the Draft EIS to give the public an opportunity to comment on the adequacy of the EIS. The Director has also promised to hold a hearing on issuance of the permit, although it may be feasible to combine the EIS and permit considerations into the same meeting.

2. In early 1987, the DEM Washington Regional Office requested that the Department of Transportation summarize the stormwater controls that would be incorporated in the design of the Baum Bridge over Roanoke Sound. Their response of February 9, 1987 is enclosed. Before commenting on their response, it is important to clarify the requirements which the EMC's coastal stormwater regulations impose on a bridge. In 15 NCAC 2H .1003(a)6, the rule states that public roads and bridges which minimize impervious surfaces, divert stormwater away from surface waters as much as possible and employ other best management practices to minimize water quality impacts are considered to conform to the requirements of the rules. This approach of using "reasonable" practices for public roads and bridges as opposed to requirements to control the one inch design storm was chosen because roads and bridges provide a public service and generate a relatively moderate amount of pollution when compared to the development that occurs adjacent to these roads and bridges. The stormwater regulations are therefore focused on new development, while still requiring reasonable controls for public roads and bridges.

For bridges in particular, we have decided that a gutter system to transport stormwater runoff back to a land area is unnecessary from a water quality perspective (the runoff from a bridge occurs where there is generally a large amount of dilution), economically impractical and it could pose a safety risk because of flooding. Hence, our efforts are focused on directing runoff from the near shore portions of the bridge through buffer areas to minimize pollution. This was done in the Baum Bridge situation.

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